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THE SCOTTISH ECONOMIC SOCIETY

NEARLY sixty years ago, shortly after Alfred Marshall, Robert Giffen, Charles Booth, George Bernard Shaw, John Neville Keynes and others had launched the Royal Economic Society, there was founded in Edinburgh the Scottish Society of Economists. It held few meetings, issued no journal, and made less stir in the world than its great contemporary, but it attracted members from a wide range of professional and commercial pursuits and made its modest contribution to the intellectual life of the town. After the death of Shield Nicholson, however, the Society languished and for the past twenty years it has ceased to meet.

In the spring of 1953 it was decided to revive and reconstitute the Society under a title less suggestive of exclusiveness and professional mysteries. The proposal was made by the economists on the staffs of the four Scottish Universities (and the Dundee School of Economics), who thought it preferable to revive the old Society than to found a new one, as they had at one time contemplated. After a short wooing, the dowager Society agreed to the match, throwing in a small dowry to show that the change of title was entirely acceptable.

The first and principal aim of the newly-wedded Societies is to revive serious discussion of social and economic issues in Scotland. The Society will have branches in the University towns and each branch will organise its own syllabus of meetings. There will also be an annual meeting of the whole Society at which, apart from any discussion of business matters, the President or some other speaker will deliver an address or open a debate. The Society's *Journal*, of which this is the first issue, will appear three times a year, generally in February, June and October.

Although the title of the Society may suggest that its membership is intended to be confined to economists, it will in fact extend over the whole field of social science. Economics in isolation from other branches of social science tends to be emasculated, and Scottish economists have long rejoiced that the old-fashioned description 'political economy', with its concrete approach and wide canvas, should continue to be applied to the chairs in each University. It is this description that appears on the cover of the *Journal*, in token of the wish to make room for politics, sociology, economic history and administration while keeping a firm core of economics.

The *Journal* is intended to appeal to an educated, but not—or not exclusively—to a professional audience. True, no economist can afford to turn his back on techniques that enable him to elucidate the great issues of the day merely because these techniques are beyond the comprehension of the layman. No learned journal can altogether exclude articles whose object is primarily theoretical: showing the imperfections of existing techniques of analysis or devising new techniques more adequate to current problems. Yet an economic journal has a special obligation to remain as near as possible the level of intelligibility by the layman, for it is the layman who, in a democratic world, has the last word in deciding the issues that the economist discusses. Moreover, in this as in other spheres, the growth of the market allows a more elaborate division of labour. There are many economic journals catering for different needs and some have already made adequate provision for the less comprehensible (because more highly theoretical) article. If, therefore, economic theory is less prominent in this journal than its importance might seem to warrant, that may be of some advantage to the lay economist, and no great loss to the professional.

It is also intended that the *Journal* should cater primarily for a Scottish audience. Other journals have started with the same admirable intention and achieved success in spite of it, by finding ten readers or more outside Scotland for every one inside the country. The most elementary market research is enough to discourage any editor from putting himself entirely at the mercy of the 'home market'. No more than a few hundred copies are sold in Scotland of the Government's annual White Paper on *Industry and Employment in Scotland*. The *Monthly Digest of Scottish Statistics* has presumably a still more restricted sale. The publications of the Scottish Council find relatively few buyers. Any serious pamphlet on Scottish economic and social problems has generally to be given away. The average reader, in Scotland as elsewhere, has an extremely

limited appetite for any lengthy analysis of general economic and social issues unless it has an obvious and immediate bearing on his personal affairs.

Yet it is difficult to feel that there is no audience in Scotland for the treatment of those issues at a more academic level than is possible in existing publications. The Universities have been turning out an increasing number of graduates trained in the social sciences; the Government and the Scottish Council have provided a far more complete picture of the Scottish economy than has hitherto been available; and there is a livelier sense of the importance of the contribution that can be made by professional economists and sociologists to an understanding of that economy. There is a clear need both for the presentation of a more systematic account of the changes that are in progress in Scotland and for a wider analytical sweep to the discussion of these changes and their significance. No one can doubt that Scotsmen are interested in what is going on in their own country and in the deeper forces that govern its future, but they frequently show a remarkable narrowness either of knowledge or of vision in the diagnosis which they offer and the remedies which they propose. The Scottish Economic Society has an opportunity both to create a more informed public opinion on economic matters and to encourage a wider and more constructive outlook. The Society might well take as its text the words of Mr. G. M. Young:—

'Between, on the one side, the compactness of party organisation made necessary by the vast size of a modern electorate, and, on the other, the technical intricacies of modern administration, the area of well-informed discussion is gradually contracting, and those who are best qualified, by education or experience, to occupy it, are gradually losing the weight they ought to carry in a well-balanced constitution . . . . To re-engage their interest and provide them with a field of useful and productive work seems . . . a task to which our more enlightened statesmanship might lend itself.'

The Scottish Council already bears witness to the value in a modern democracy of an outlet for opinion that is thirled neither to Government nor to party, is not the expression of sectional interests and is entitled to respect because disinterested and well-informed. But there is room also for a society pursuing the analysis of social trends rather than the moulding of opinion, and seeking to advance knowledge rather than to formulate a programme of action. The Scottish Economic Society has no propagandist ambitions; it must conduct itself as a learned society, concerning itself with matters of long-term importance rather than immediate urgency, and letting the wind of free

discussion blow where it listeth, provided that the level of argument merits honest consideration.

Some part of each issue of the Society's *Journal* will be devoted, therefore, to Scottish affairs: either in articles, or in editorial notes, or in notes on recent social and economic trends such as appear in this issue. There will also, from time to time, be reviews or review-articles dealing with recent books or official papers relating to Scotland. It is intended, for example, to publish in the next issue a discussion of recent publications on crofting, including the report of the Taylor Committee of Enquiry. Later there will be a review of the symposium on *The Scottish Economy* which is shortly to be published by the Cambridge University Press as the second of a series of studies issued by the Department of Social and Economic Research, University of Glasgow. The results of research work carried on in Scotland will also be included: for example, a summary of the investigation carried out over the past three years at Aberdeen into the cost of starting a family.

There is, however, no intention of limiting the contents of the *Journal* either to Scottish contributions or to Scottish subjects. Even in this first issue, two of the authors are not Scots, although they happen to hold posts at Scottish Universities, and at least one of the articles has no particular connection with Scotland. It would, indeed, contribute little to an understanding of Scottish problems if they had to be approached in isolation from the far more powerful forces, generally originating outside Scotland, that give these problems their shape. Modern industrial society does not differ so widely from one country to another that it can usefully be analysed country by country, as if it were the unique national and geographical elements and not the common international elements that gave motion and coherence to it. It was 'the wealth of nations' not 'the wealth of *a* nation' that Adam Smith thought worthy of study, yet he, more than any other man, grasped the full significance of the forces at work in the Scotland of his time. Only by constant comparison with other countries can a real insight be gained into what is happening in any one, and only by an analysis of the general forces at work on an international scale can the residual influence of local and national forces be measured. It would, therefore, be fatal to the purposes of the *Journal* if it were conceived in purely national terms and deliberately narrowed to the treatment of Scottish themes by Scottish contributors.

It is natural that, at its inception, the new Society should look back with pride to those earlier times when Scotsmen were laying

the foundations of the social sciences, but it is equally necessary to remember with due humility the subordinate part that they have since played in the development of them. When the eighteenth century was at an end who was there to take over from Adam Smith and David Hume? The great names of the past hundred and fifty years include many Englishmen, Swedes, Austrians and Americans, as well as men of other nationalities, but few Scotsmen either in the older social sciences or in the new. The economists who come first to mind—James Mill, McCulloch, Hubert Henderson—lived most of their lives out of Scotland. There was no 'school' of Scottish economists like that of Lausanne, Vienna, or even Manchester. The first chair of Political Economy in a Scottish University does not go back beyond 1871. Glasgow, Adam Smith's own University, was the first in Britain to found a chair of Engineering; but it had no chair of Political Economy until half a century later, and it was another half century before there was a second chair in any branch of social science. The facilities for teaching politics, psychology, sociology and even economic history at the four Scottish Universities are nearly all of comparatively recent origin.

It is curious that so glorious a beginning should have been followed by so prolonged a neglect: all the more so in view of the reputation of the Scots both as philosophers and as men of affairs. The neglect, moreover, was not confined to academic circles. The contributions to social science that were made in England from Ricardo to Hobson by economists with no professional training find few parallels in Scotland. Even the socialists of the late nineteenth century produced no literature to rival that of the early pamphleteers—including Scots like John Gray—who fired the imagination of Karl Marx. An odd heretic like Major Douglas, and an odd statesman like A. J. Balfour, made incursions into economics, but these exceptions, neither of them rooted deeply in Scotland, merely prove the rule. The Universities produced no one of consequence until the end of the century, and it is probably not unfair to name Lauderdale and Giffen as the only two nineteenth century Scottish economists who are still read.

If there is no continuous line of descent from Adam Smith, there is, however, a tradition of another kind. The bent of Scottish economists is quite distinctive. They like to approach social and economic problems on a broad front, employing an empirical, matter-of-fact treatment rather than a highly abstract analysis. It was of the English philosophers that Keynes was speaking when he described them as 'united in a preference for what is matter of fact . . . , (conceiving) their subject as a branch rather of science than of the creative imagina-

tion, prose writers, hoping to be understood'. But he included Hume and he might equally have included Adam Smith. The Scottish tradition is also a prose tradition, with a distrust of theoretical refinements and long chains of reasoning, and a strong preference for checking at every stage the conclusions of the argument against the evidence of everyday observation. The Scot has perhaps a greater pleasure in dialectic than the Englishman and he is at least as much given to moving from problem to problem rather than from theorem to theorem.

It is upon this common bent rather than any splendid antecedents that The Scottish Economic Society must build. It can build also upon the existence in the Universities, and outside them—in Government service, in the professions and, to a lesser extent, in industry—of a large number of men trained in economics or some other branch of social science and capable of sustaining a journal of this kind. The Universities have agreed to guarantee the *Journal* against loss for a trial period of five years and the University staffs have already shown great enthusiasm for the venture. But the Society, if it is to succeed, cannot be an exclusively University affair; nor can the *Journal* succeed if it does not circulate outside the Universities. Both Society and *Journal* can thrive only if there is a joining of forces between those who reflect on economic and social problems and those who handle them.

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THE SCOTTISH SOCIETY OF ECONOMISTS

THE Scottish Society of Economists was founded on the 29th June 1897. It derived largely from the efforts of Professor Shield Nicholson, its first President, to promote an informed public opinion on matters of economic importance as they arose. The initiative in the formation of the Society came from John H. Romanes, LL.B., W.S., its first Secretary, and throughout its life one of its most active and keen supporters. The inaugural address of the President, delivered in November 1897, appeared in the *Economic Journal* issued the following month.

The Society was supported by leading men in all branches of professional and business life, as shown by the list of office-bearers and members of Council.

President	Professor Shield Nicholson.
Hon. Vice-Presidents	His Grace the Duke of Argyll. The Rt. Hon. A. J. Balfour. The Rt. Hon. the Earl of Wemyss and March. The Rt. Hon. Earl Reay. Sir Arthur Mitchell. Robert Cox, M.P.
Vice-Presidents	George Auldjo Jamieson. John M. McCandlish. John Ritchie Findlay (Proprietor of *The Scotsman*).
Council	J. Robertson Christie (Advocate). A. B. Clark, M.A. A. H. Briggs Constable (Advocate; later Lord Constable and always a keen supporter). William Ingram, D.Sc. (Advocate). A. W. Kerr (Royal Bank of Scotland). R. C. Mossman, F.R.S.E. David Paulin, F.F.A. W. C. Smith (Advocate). James Watt, W.S.
Hon. Treasurer	T. J. Millar, C.A.
Hon. Secretary	J. H. Romanes.

Professor Nicholson resigned from the Presidency in 1903. The Presidents who followed him were Sheriff W. C. Smith, Mr. A. H. B. Constable, K.C., Mr. G. W. Currie, C.A., M.P., Sir David Paulin, F.F.A., and Mr. J. H. Romanes. Vacancies in the list of Hon. Vice-Presidents were later filled by Professor Nicholson, Viscount Haldane, Professor Ashley, and Mr. Romanes.

The original membership was 108. Women were admitted to membership for the first time in 1905, and of the four women who were then admitted, one was Miss Webb, sister of Sidney Webb.

Those who addressed the Society during the first 20 years of its existence included economists like Professors Smart, Bastable, Cannan, L. L. Price, Daniels (Princeton University), Ashley, Bowley, and W. R. Scott; historians such as Professors Lodge, Cunningham and Unwin; and many public figures (including Viscount Haldane of Cloan and St. Loe Strachey). In the period of reconstruction after the 1914-18 War, the Society arranged for lectures by Sir Algernon Frith, Mr. Hewins, the Rt. Hon. J. M. Robertson and Sir Hugh Bell, Sir Charles Addis, J. M. Keynes, and Sir William Beveridge.

The Society did not publish its transactions but many of the papers that were read appeared in the journals of other Societies. Arrangements were made with those journals for the provision of reprints of such papers, and the reprints were circulated to the members of the Society. The chief journals concerned were the *Economic Journal, The Accountants' Magazine, Juridical Review, Poor Law and Local Government Magazine, National Review, Scottish Law Review, Royal Scottish Arboriculture Society's Proceedings*, etc.

Many of the published papers appeared in the *Economic Journal.* There was a special arrangement with *The Accountants' Magazine* that it would have the offer of any papers which the authors had no special desire to publish elsewhere.

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LABOUR TURNOVER IN THE CLYDE SHIPBUILDING INDUSTRY

I

As an offspring of the Industrial Revolution, the building of metal ships lacks the comparatively simple occupational make-up of earlier industrial organisation. On the other hand, as a comparatively old industry, shipbuilding lacks the flexible and loosely defined divisions characteristic of more recent developments. The labour force is composed of trades rigidly demarcated in their functions. On Clydeside at least, the apprenticeship system is universal and the tradesmen are all fully time-served men.

Some of the trades date from before the iron and steel era. For example, the shipwright was originally a worker in wood who fashioned the hull of the ship, and part of this connection with wood remains—it is the shipwright who lays the wooden decks. Nowadays, however, most of the shipwright's duties are associated with 'fashioning' the ship and preparing it for launching; one of his principal tasks is to 'fair' and line up the many parts of the ship.

Most trades in the industry are products of the later use of iron and steel. Where changing techniques have altered the skills required, the change has been met either by development of an existing trade or by the creation of a new one. Some trades have been extended to take in new requirements along the lines of the trade's function, or the material in which it works, or the tools it uses; also, new trades have been set up (a notable example being the welders).

There are very few independent groups of semi-skilled operatives in a shipyard, since new operations have not been allowed to go free and be taken up as semi-skilled. The redleaders (who paint the ship with red lead to prevent rust) and the stagers (who provide various forms of access scaffolding) are possibly the only good examples of semi-skilled workers who are reasonably complete and sufficient unto themselves. Other semi-skilled workers are either ancillary operatives (such as cranemen) or helpers (such as smiths' hammermen).

Shipbuilding is therefore a tradesman's industry.[1] The community of purpose and homogeneity of status of a mass-production factory

[1] It is also a man's industry. In war-time women dilutees were employed on production work but now very few women are actually working on the ships, though there are a number of women in ancillary occupations. Two trades are exceptions to this—french polishers and upholsterers are generally women—and these have conformed to the typical apprenticeship organisation of the rest of the industry.

are lacking. Moreover, while several of the trades are confined mainly to shipbuilding or are restricted in their outside applications to certain types of heavy and structural engineering, the ship is often so like a floating house or factory that (even excluding the numerous engine-shop trades) it requires a large assortment of trades derived from other industries to help in its completion.

II

Causes of Employment Variations

The feature which most immediately strikes the observer of the labour force in shipbuilding is the extent to which the numbers employed by any one yard and their occupational distribution vary from month to month. This variability in employment is indeed so integral to the labour problems of the industry that most of this article is built around it. This section examines the causes of employment fluctuation, both generally and with particular reference to the Clyde. Succeeding sections deal with other aspects of the shipbuilding labour force but these too are largely connected with employment variability.

There are several important causes of fluctuation in the labour requirements of a shipyard over the short period (excluding long-term cyclical fluctuations).

1. It is generally true that a smooth flow of production can be most readily organised when the product in question is to be turned out to a pattern and in numbers; and also it is generally true that smooth production flow is best achieved with relatively small final units, notably with consumers' goods. Production problems—such as, for example, the fitting of an appropriate incentive scheme to the production flow—are solved more readily with the constancy of the problem to be faced and the atmosphere of long-term planning which accompany organisation for mass production. Firms engaged in batch production work can partake of some of these advantages, but those engaged in individual unit production can not. A shipyard proceeds by individual unit production; as a result, production planning—of labour requirements as well as of other things—has to be individual to each ship and cannot readily be standardised. This might not be of great importance were a ship not so large and complicated a unit. Where the individually designed units are small, it may be possible by virtue of the numbers involved to dovetail the labour requirements of successive units; but even the largest shipyard is limited to a com-

paratively small number of units of output (ships) in a year. As a result, production in terms of units of output must proceed jerkily, and so, therefore, will the yard's labour requirements. It is the size and individuality of the product and the consequent irregularity of output that are the primary sources of the fluctuations in total labour requirements in the short period.

Given a full order book, the number of ships which a yard can undertake at any one time is limited by the number and size of berths available. While a yard can sub-contract engine work and obtain outside facilities for docking and fitting-out basins, it must normally build ships on its own berths and cannot lay down more ships than it has berths. Within the maximum capacity of the berth the firm can determine how best to utilise it, whether for a large ship of simple construction or for a smaller and more specialist craft (each having different labour requirements). Efforts to co-ordinate production and to regularise labour use must go on within this over-riding limitation. The number of berths in a shipyard is generally small.[2] There may, therefore, be only four or five different ships on the stocks at one time and only four or five different jobs to synchronise in an attempt to reduce fluctuations in labour demand.

Apart from the limitation imposed by the number of available berths, building space is also restricted by the time each ship is on the stocks. Delays in building time will disrupt the planning of the labour requirements of the yard.

2. The small number of units produced by a shipyard becomes especially important because of the way in which the pattern of types of labour required on a ship varies as the ship progresses from its laying down to its completion. In the initial stages, the chief work is that of the planning departments. When it comes to the building, the typically shipyard trades take over (shipwrights, platers, drillers, caulkers, smiths, welders, riveters and so on). In the later stages, and especially after launching, it is the turn of other groups (painters, plumbers, joiners, electricians, and a host of specialist groups).

The main distinction is between the basic shipyard trades and the 'fitting-out' trades. The former concentrate on the first half of the job and the latter on its completion. Within these groups, however, the times of the peak labour demands vary: for example, the job of the welders and riveters reaches its peak after the platers have almost

[2] The largest number of berths in a shipyard in the United Kingdom is eighteen (Harland & Wolff's, Belfast). One Clyde yard has eleven berths. The average number is more like four or five.

finished getting the plates ready. As a result, the curve of labour requirements for a ship is composed of a number of separate curves for different occupations, each reaching its peak and declining at different stages in the ship's building period. In order to provide steady employment for any one occupational group, it would be necessary to phase the operations of each trade on each ship in such a way as to bring one ship to the required stage as another ship left it, and to join the curves of requirements for each occupation on a number of ships so as to provide a smooth demand for the yard as a whole. The small number of units of output which can be linked in this way makes the task difficult, and delays in production may throw the arrangement badly out of phase.

Not only is there a variation in the period of peak demand for different types of labour but some types have a much more rapid increase in their work and a much more rapid decline after its completion. For example, the services of shipwrights are required fairly constantly during the building of the ship, while electricians, who come in at the fitting-out stage, can be put to work in strength to get their job done and can to a large extent finish together, so that there is little build-up or run-down in their employment.

3. Regularity of employment would be difficult enough to arrange, either in total or by occupation, when the product is large, the numbers small and the occupational pattern varying. Matters are further complicated by the changing pattern of demand for different types of ships. To take an extreme example, a luxury passenger liner requires a very large number of different skills in its fitting-out, while a tanker of simple design, by the time it has been launched, is well on the road to being finished. Again the main distinction is between basic and fitting-out trades, and the latter group is, owing to this cause, subject to much greater uncertainty of employment. Within these broad groups, however, demands may vary according to the type of ship. For example, a tanker has thick plates which require a lot of welding, but since it is of relatively simple design, the platers' work in getting the plates ready is not too difficult, and in this case the proportion of welders to platers is likely to be high. A shipyard, even if it dealt with the problems of organisation discussed earlier, would have to continue building the same type of ship before regular employment for all trades would be possible.

4. There is one other major general cause of variability of employment—the influence of changing shipbuilding techniques. This is, however, a rather different matter since it generally means a steady trend in employment, either up or down, for the trades concerned.

The major example of changing techniques and of their effect on the composition of the shipbuilding labour force has been in recent years the increasing use of welding in place of riveting. This has led to a rapid decline in the number of riveters and a fairly rapid increase in the number of welders. With this have come problems of the ageing of the remaining riveters and of the virtually complete absence of apprentice riveters, and on the other hand, problems of the organisation and status of the welders as a craft. The growth of pre-fabrication following upon the increased use of welders has also greatly affected the employment of smiths and has led to the taking over by the welders of some of the platers' functions in rolling and shaping metal.

These general causes of the variability of employment in shipbuilding operate on the Clyde as elsewhere, but some additional points may be made with reference to this particular area.

1. Since there are a number of yards and a large total labour force on the Clyde, the variability of employment in any one yard must be treated in conjunction with the similar problems of other yards. The general causes of employment variations are the same in a yard which lies within a shipbuilding region as they are where one yard is the only important centre of the shipbuilding industry in the area, as at Belfast and Barrow. But neither cause nor effect is as clearly seen in an area with several yards as in an area with only one.

2. The average number of berths in Clyde yards is small. The larger shipyards go in for larger ships rather than for more berths.

3. The different composition of the labour force for different types of ships is of importance on Clydeside mainly because it is an area which has always tended to build a large variety of ship types. The Clyde yards have generally preferred to take orders for ships of an individual character. They have preferred to specialise in building ships of individual and special design rather than build large numbers of ships of a more or less standard pattern. This is not true of all yards on the Clyde but it is sufficiently true of a number of Clyde yards to differentiate the Clyde as a whole from the other great shipbuilding region, the north-east coast of England, where more attention has tended to be paid to the routine ' run of the mill ' general-purpose vessels. Such a preference for special craft—be they passenger liners, dredgers, warships or refrigerated vessels—is bound to have accentuated the changing labour requirements of the Clyde yards.

In recent years, however, this factor has worked in a rather different way. The post-war demand for new ships has been to a very considerable extent a demand for tankers. Without minimising the production problems of tanker construction, it can be said with fair

certainty that the tanker is likely to lend itself in its building to more standardised methods, to fewer problems associated with each particular ship, to fewer ' frills ', and certainly to less work on accommodation and at the fitting-out stage. This has suited the yards which have liked building routine ships or a series of similar vessels; it has not suited the specialist yards. In consequence, the Clyde has lagged behind the north-east coast in the proportion of tanker construction to its total output, and certain Clyde yards have still largely resisted the movement towards building tankers. Nevertheless, the proportion of tanker construction has gone up on Clydeside and the result in terms of the utilisation of the labour force has been to reduce the proportionate demand for labour in the fitting-out trades. Moreover, for a considerable period after the war at least, there was little or no demand for luxury liners and this, too, adversely affected the fitting-out trades.

4. Of the delays affecting labour requirements, the worst on Clydeside have arisen out of the steel shortage (now fortunately past its worst). The Scottish steel works which supply the yards are dependent to a greater extent than those in other parts of the country on scrap, and scrap was the scarcest raw material affecting steel supply. Consequently ships have been held up by lack of a smooth delivery of the requisite types of steel for shipbuilding. This has led to underworking rather than paying-off of labour. Some yards held on to skilled men because they would be needed whenever steel supplies came forward. Most yards found that their men were held up at every stage by lack of the next piece of material, and, since the ship has generally to be prepared for building in sequence, men could not easily find an alternative job. The order of priorities of delivery from the steel works was also confused, so that yards got some deliveries of less urgent material and had to wait for the most urgent supplies. All this meant an increase in labour costs and delays in the employment of workers for the next stage of the building (*e.g.*, the finishing trades were held up until these delays were sorted out).

III

Labour Turnover

It is natural to expect that a high labour turnover will go with a lack of certainty in employment prospects. In the case of shipbuilding, since lack of security of employment seems to be due to the difficulties of organisation of work on the employer's side, part of voluntary turnover may perhaps fairly be blamed on the conditions

provided by the employer. Voluntary changing of jobs is likely to be high in shipbuilding unless the workers show a greater than usual loyalty under difficult circumstances. In any case, where fluctuations in labour demand are common, voluntary turnover will be replaced by involuntary turnover—paying-off on completion of jobs—as the main source of labour movement.

Turnover can thus be expected to be above average in the shipyards compared with most other industries. Within the industry, it will be highest in the trades that are most subject to variability of employment. In general, therefore, the basic shipyard trades are likely to have a lower turnover than the ephemeral fitting-out trades. The ancillary occupations, such as cranemen, which are more of an overhead than a direct labour cost, tend to have a lower level of turnover, while labourers, though possibly subject to higher voluntary turnover, may also have lower involuntary turnover, provided they are mobile in their attachment to trades and not inalienably attached to one skilled trade as helpers.

The rate of turnover affects both the length of service of employees in different occupational groups and the attachment of workers to the shipbuilding industry as a whole.

Turnover is almost invariably a marginal phenomenon. For example, the picture has long been familiar of an industry that employs semi-skilled female labour being troubled with a large proportion of ' floaters ', who move from one factory to another or from one trade to another for reasons of no greater definiteness than merely being ' fed up '. As a result, the idea of labour turnover tends always to overemphasise the degree of change in the labour force by concentrating attention on the changing population at the margin. A low average length of service is not necessarily a corollary of high turnover. Nevertheless, where turnover is high, and particularly where total employment in a trade fluctuates widely, the average length of service of employees will reflect the marginal movement since that movement may at times be disproportionately large. In shipbuilding, therefore, a high proportion of fairly recent employees and a low proportion of long service employees is to be expected, and this will be specially marked in the less securely employed trades.

One of the certain results of a big variation in employment levels in any one yard is that there will have to be a constant intake of labour from other firms. This intake will be larger in the trades with wide fluctuations in employment. Whether this intake comes mainly from other shipbuilding firms or from outside can only be

discussed with reference to the experience of particular firms or areas.[3] Two general points may be made at this stage.

First, the finishing trades, which have the greatest tendency to movement, are also the trades which are most closely associated with industries outside shipbuilding. Electricians, joiners, plumbers and painters have all possibilities of employment outwith the shipbuilding industry and it seems probable that these workers are relatively mobile between industries, particularly since the building industry, their main point of contact, is not itself very stable in employment prospects.

Secondly, the source of the intake depends upon the definition given to shipbuilding. It is possible to define the shipbuilding industry either very widely, to include marine engineering and all those firms which work for the industry in any capacity, or, very narrowly, to include only those firms which actually work on building ships. A ship is so complex, and, on the Clyde at least, there are so many yards, that the shipbuilding industry can pull into its orbit all sorts of other industries. Furniture-makers can become ship's furniture specialists; instrument-makers can specialise in marine instruments for ships—and so on. If the widest definition is taken, then mobility between industries is probably low. On the Clyde, the widest definition would greatly reduce the number of firms entitled to claim that they were not engaged in shipbuilding, and there would therefore be little movement of labour to and from firms outside the orbit of shipbuilding. The narrow definition seems more meaningful since it distinguishes between shipbuilding firms and those firms which, though they may be largely engaged on shipbuilding work at present, are not by nature tied to the industry and could conceivably find other markets.

IV

Employer and Employee Attitudes

In an industry like shipbuilding there might seem to be little inducement to the average worker to feel attached to the yard in which he is at present working. This is not true, however, of all Clyde shipyard workers; undoubtedly some employees have been with their firm for a long time and have a high degree of loyalty to it, but those workers tend to be submerged by the rapidly changing element. Further, there is likely to be more continuous attachment among the skilled and the specialist shipyard trades than with other groups.

[3] The fairly rapid run-down in employment in shipbuilding after the war seems to have been accomplished with remarkably little friction. This suggests that the labour force was capable of going to other industries.

The situation is similar to, though less pronounced than, that which occurs under conditions of casual labour.[4] It is worth while looking at the labour relations of the industry briefly to see how they reflect an atmosphere conditioned by casual labour and uncertainty of employment.

Shipbuilding has the reputation of being a 'hard' industry. This suggests that in contrast to other industries shipbuilding managements in their attitude to labour are rather more able to make use of their powers to get rid of unwanted elements in their labour force and are rather less addicted to, or impressed by, the new techniques of personnel management. Such an attitude could follow logically from a high variability of employment. The labour force is changing so rapidly, and there are so many opportunities for paying men off, that there is no need 'to stand any nonsense' from unwanted elements. Further, with a changing labour force the management will naturally tend to regard the personnel department more as an employment department than as a welfare one. Concern with long-term welfare of employees will be limited to relatively small numbers.

The workers' side of the industry is characterised by an unyielding insistence on rights and conditions.[5] Certainly the demarcation disputes are notorious for a rigid insistence by the workers on the careful observance of their privileges and prerogatives. Methods of payment are extremely complex and involve bargaining wherever conditions differ from normal. This attitude of mind of the workers seems to be explainable only if attributed to a sense of opposition of interests between management and men within the industrial set-up. This is not to say that the men do not regard themselves as shipbuilders too, but they are not conscious of an over-riding loyalty to

[4] The dockers have come to be regarded as providing the classic example of the problems and difficulties attached to casual labour. The chief weaknesses of their position in pre-war years were probably the almost complete absence of guaranteed employment (and payment) even on a day-to-day basis, and a somewhat arbitrary and involved system of payment which had grown around the continual bargaining for employment on a single-job-of-work basis. The post-war attempts to cure the discontent and bad labour relations in the docks have concentrated mainly on schemes to guarantee employment and attachment to the industry and to provide a minimum guaranteed wage. The attachment provided for the dockers, however, has been to the National Dock Labour Board rather than to any actual employer. This may be appropriate to relatively unskilled groups but would hardly be adequate for skilled employees such as the majority of shipbuilding workers.

[5] It is interesting to reflect that a worker's attitude of anti-authoritarianism may be the inevitable antithesis of an employer's 'hard' industry. Since there would appear to be a fairly widespread movement of labour in the area to and from shipbuilding, the shipbuilding worker's attitude of mind may, since it is the dominant industry, have become the attitude of the area as a whole. This line of reasoning could possibly lead us to the genesis of the so-called 'red' Clydeside in a social (and industrial), rather than a political, attitude of revolt against authority.

any one firm such as would prescribe maximum co-operation and a willingness to 'come and go'. This can hardly be thought surprising if the considerable lack of certainty in employment and the consequent amount of changing of jobs is borne in mind. In fact, it is too much to expect great attachment even to the industry, since each worker's particular place in the industry's structure is so frequently disturbed. The case study given below suggests a high tendency to move into and out of the industry, and this may be further illustrated by recent concern on Clydeside over the ease with which an alternative type of employment has drawn away men.[6] But how far can the uncertainty of employment prospects be reduced?

The previous sections will have made it apparent that shipbuilding is not an industry which can plan its total requirements of labour or its occupational composition to the last man. A changing production pattern calls for flexibility of occupational composition, while a changing demand for ships means variations in labour requirements. A completely rigid employment structure can hardly be contemplated. There is an abundant case for a fringe of labour—and a fairly large fringe—which is mobile between shipbuilding and other industries and is not 'attached'. What is worth considering, however, is an attempt to bring about attachment of the essential core of workers in the industry and to achieve for them a higher degree of security than they have at present.

Regularity of employment for the essential skilled workers could conceivably be achieved on the Clyde at two different levels—for the Clyde industry as a whole and in each yard. As to the former possibility, there is very little evidence of any attempt by employers to plan the labour supply of the area as a whole. In fact, to a very large extent, the recruitment of labour to the Clyde yards is haphazard in that the sources of labour supply and its availability are not adequately known beforehand. Before even a survey of skilled labour resources in the area is available, it is difficult to talk of any more involved form of co-operation.

The essential point in talking of greater security of employment within any one yard is the limitation imposed by the size of the yard's production programme. This limitation will affect different occupations in different ways and will be most severe in the fitting-out trades. In the basic shipyard trades, however, it seems probable that at least half of normal total employment could be guaranteed most of the

[6] During the post-war period the building of a number of new oil refineries in the United Kingdom has created an unusual centre of demand for the type of labour which shipyards provide. This has caused a considerable drift of men away from the industry—some to Grangemouth and some right to the south coast of England.

time. This suggests[7] that two grades of employment might be established, the one being guaranteed continuous attachment. This would involve the management in granting additional privileges to the men so employed and in finding work to carry them over times when the demand for the services of their trade was abnormally slack, and when, under present conditions they would be paid off; and it would involve the workers in increased responsibility and attachment to the yard. If something of this sort secured a more permanent labour force amounting to even half the normal average employment in each skilled group, a large weight would have been added to the sense of stability of the yard's labour force.

Such a scheme might, however, have less success with the fitting-out trades and others whose duties on any one ship last a comparatively short time. Here it would be difficult to guarantee secure employment to a sizeable proportion. This leads to a possibility that a similar result might be achieved by the co-operation of a small group of yards—holding some number of their skilled employees in common and co-ordinating their labour requirements on production and maintenance work. An increase in the numbers of ships and yards which are dependent on the same labour would certainly lead to an increase in the security of work that could be offered.

A possible compromise, reflecting the actual variations in the labour force, could be that a proportion (possibly about a third) of the average employment in each trade was covered by a special contract with one yard, while a further similar proportion of normal employment of each of a small group of yards was covered by a scheme involving special rights and duties between the men and the group of yards and some co-operation between these yards in planning their labour requirements.

The biggest single snag in any such scheme would be the possibility of a prolonged period of low employment which might lead to its abandonment. A scheme of this kind might, however, be useful in providing guidance in reducing employment and an agency for planning palliative measures.

V

Some Effects of a Decline in Demand for Ships

This discussion contains some indications of the way in which a decline in the demand for ships might affect the labour force of the Clyde area.

[7] It will be readily appreciated that this is only the most tentative of suggestions and is in no sense a detailed plan.

1. There might be a disastrous fall in the demand for one particular type of ship, built predominantly by one or two specialised yards, and bringing about the collapse of these yards. In that event, if demand remained fairly high in other respects, the skilled labour force should be sufficiently mobile, and used to moving, to spread itself round the other yards. There might, therefore, be a rise in the general level of unemployment rather than a definite pocket of unemployment among workers previously attached to the yards affected.

2. The normal pattern of employment resulting from a general decline in the demand for ships would show periods of employment alternating with unemployment; and as the number of ships under construction declined, this tendency to spasmodic employment would increase. Under such conditions there would be a danger that many more workers would remain loosely attached to the industry than it could normally employ, and the movement of labour from yard to yard would be likely to increase.

3. The type of ship still being built under conditions of low demand would determine the composition of the labour force required. In general, however, the finishing trades would be much the least certain of employment for any lengthy period, and the basic shipyard trades would be more likely to have longer spells of employment in shipbuilding and greater difficulty in taking advantage of opportunities of employment elsewhere.

4. How disastrous a decline in shipbuilding would be to employment on Clydeside would depend largely on how other Scottish industries were affected. It seems possible that there is sufficient mobility between shipbuilding firms narrowly defined and those not specifically committed to building ships to allow the absorption of surplus shipyard employees without too great dislocation, provided that the demand for the products of other firms in the area remained high. If there were a general depression a solution of this sort would be out of the question; but if the demand for ships declined without a commensurate decline in other industries, then a transfer of labour might be possible. In the long run, the real danger of long-term unemployment on Clydeside may lie in the interconnection between other local industries and shipbuilding—the market on their doorstep. From the employment point of view, there would be much less need to worry about a decline in the demand for ships if it could be felt that the other firms and industries on Clydeside were capable of finding and meeting the demands of alternative markets.

VI

A Study of One Shipyard

The remainder of this article consists of an analysis and discussion of data extracted from the employment records of a large and well-known shipyard in Glasgow.[8] The results of the enquiry are given in the tables in the text. A ' Note on the Statistics ' provides additional information on the records from which the material was taken and the qualifications to be attached to its use.

Employment Variation

Table I gives average weekly employment in 1952 in the yard, subdivided into a number of trade groups. It also shows the extent of the variation in employment levels in 1952. The extent of employment variations differs greatly between trades. The largest variations are among the fitting-out trades and the greatest stability is in the basic trades of platers and shipwrights. The unskilled and semi-skilled whose work is less specialised and therefore less influenced by the different types of job coming forward, have low variations. If the individual small occupational groups given in footnote 2 of the table are examined the same pattern emerges: there is a very wide range of variation among the painters and a small variation in essential shipyard trades and ancillary occupations. The decline of the riveters through changing techniques continued in 1952.

A comparison of the average employment figures in Table I with the figures giving the composition of the sample in Tables III, IV and VI shows the effects of a change in the type of ship built, and how the labour requirements differ at different stages of the building. By July 1953—the date of the sample—the firm was engaged in fitting-out a passenger vessel and there was a marked increase in all fitting-out trades.

The table does not perhaps indicate as much variation in employment levels as might, on theoretical grounds, be expected. The influence of dovetailing labour requirements for different jobs is apparent. Certainly, the records of employment requirements for each ship, which are not analysed here but have been examined, show much greater fluctuations from week to week in the labour requirements for each trade.

[8] The firm is one of marine engineers and ship repairers as well as shipbuilders, but only shipyard employees have been considered.

TABLE I

EMPLOYMENT IN A SHIPYARD IN 1952

Occupation[1]	Average Weekly Employment in 1952		Variations in Employment in 1952 as Percentage of Average	
	No.	%	Maximum %	Minimum %
Joiners	213	9	130	84
Electricians	155	6	123	74
Plumbers	178	7	109	84
Sheet iron workers	111	5	125	83
Welders	113	5	113	83
Shipwrights	92	4	111	91
Smiths and riveters[2]	111	5	112	84
Platers	172	7	106	93
Other skilled trades[2]	207	9	117	86
Redleaders, cranemen[2] and stagers	113	5	109	89
Platers' helpers	149	6	111	91
Unskilled	437	18	105	92
Boys and apprentices	301	13	110	83
Women	30	1	123	80
Total	2,382	100	106	94

[1] Other skilled trades include painters, sawmill trades, drillers, caulkers, tinsmiths, riggers, mechanics and one or two miscellaneous trades—grouped together because of the small numbers in each individual category. Unskilled includes labourers, storemen, watchmen, etc., and also helpers, with the exceptions of platers' helpers (shown separately), smiths' hammermen and strikers, riveters' holders-on and heaters, and riggers' helpers (each given with their respective trades).

[2] The percentage variations in employment in 1952 in the trades making up these groups are as follows: smiths 104, 96; riveters 119, 73; painters 200, 29; tinsmiths 100, 91; sawmill trades 100, 100; drillers 109, 94; caulkers 111, 91; riggers 105, 95; mechanics 102, 94; cranemen (and drivers) 109, 95; stagers 108, 88; and redleaders 110, 81. The low minimum percentage for riveters is due to the fact that this trade exhibited a regular tendency to decline throughout the year.

Labour Turnover

Table II gives estimates of labour turnover in the shipyard by occupational groups. As the 'Note on the Statistics' indicates, this table is subject to several qualifications and should be treated with caution. General records of labour turnover in shipbuilding are not readily available (the Ministry of Labour figures do not list shipbuilding as one of their groups), so that comparison of data for this yard with data for the industry as a whole is not possible. In comparison with other industries, however, the figures for this yard indicate a high average turnover. Further, there is a marked tendency for turnover to be high in those trades where variability of employment

is high. High turnover in a trade is therefore associated with high employment variation. The low turnover of some of the basic shipyard trades, such as smiths, riveters, caulkers and drillers is worthy of comment. The semi-skilled group of redleaders, cranemen and stagers also has low turnover.

TABLE II

LABOUR TURNOVER IN A SHIPYARD IN 1952

Occupation	Employment in First Week of Year	Total number in year paid off and replaced by new starts	Annual Average of Weekly Turnover (%)
Joiners	206	105	51
Electricians	174	105	60
Plumbers	188	90	48
Sheet iron workers	113	55	49
Welders	123	40	32
Shipwrights	99	55	56
Smiths and riveters	118	20	17
Platers	165	50	30
Other skilled trades	210	55[1]	26
Redleaders, cranemen and stagers	106	25	23
Platers' helpers	147	70	48
Unskilled	440	170	39[2]
Boys and apprentices	274	70	26[2]
Women	27	40	—[2]
Total	2,390	950	40[2]

[1] The figure for this group is mainly due to the rapid rate of change of painters. Others in the group tend to have low turnover.

[2] The figures of turnover and of employment for women are compiled on a different basis and the percentage turnover figure is therefore without meaning. Those for boys and apprentices and for unskilled may be on a slightly different basis, and percentage turnover (especially in the former case) should therefore be taken with caution. These qualifications also affect the validity of the total figures to some extent.

Length of Service

Table III shows, for the sample of present employees (July 1953) of the yard, the length of service with the company. The totals of this table indicate how large a proportion of the labour force represents recent acquisitions.[9] Two-fifths of the sample had worked in the yard for less than a year. The hard core of long service workers who have been there for ten years or more is about one-sixth. The median (mid-point) of the distribution occurs somewhere in the 1-3 years'

[9] The fact that the firm was engaged in the fitting-out of a large passenger vessel at the date of the sample has, however, undoubtedly accentuated and exaggerated this tendency.

service group. One-half of the employees have less than three years' service. If the long service workers (of over ten years' service) are regarded as a stabilising influence, then they are outnumbered two to one by new employees with less than one year's service.

TABLE III

LENGTH OF EMPLOYMENT OF SAMPLE OF PRESENT EMPLOYEES OF A SHIPYARD AT 1st JULY 1953

Occupation	Length of Employment						Total
	Under 3 months	3 months to 1 year	1 year to 3 years	3 years to 5 years	5 years to 10 years	10 years and over	
Joiners	10	9	5	2	6	1	33
Electricians	5	10	3	—	2	—	20
Plumbers	7	7	8	3	4	1	30
Sheet iron workers	2	5	2	2	—	4	15
Welders	1	5	2	5	1	5	19
Shipwrights	3	1	2	3	1	3	13
Smiths and riveters	—	2	2	3	2	4	13
Platers	—	1	6	6	1	8	22
Other skilled trades	5	1	5	1	3	9	24
Redleaders, cranemen and stagers	1	3	3	1	1	7	16
Platers' helpers	2	3	3	1	1	4	14
Unskilled	6	19	11	3	5	7	51
Boys and apprentices	2	9	10	1	—	—	22
Women	2	2	3	1	—	—	8
Total	46	77	65	32	27	53	300

In the individual occupational groups, the basic shipyard trades (such as platers, welders and most of the 'other skilled trades') have a high proportion of long service employees. The fitting-out trades (such as joiners, electricians and plumbers) with high employment variations have very few in the long service group. It is interesting, however, that, despite fluctuating employment levels and high turnover, several members of these trades have been in the firm for a number of years. For example, seven out of the thirty-three joiners in the sample have been employed for over five years. The ancillary occupations of cranemen and stagers have a high proportion with over ten years' service. Unskilled long period employees are few in number and a high proportion are recent acquisitions, but the attachment of unskilled workers to the yard nevertheless compares favour-

ably with that of some of the skilled trades. There are naturally no boys or apprentices in the over-ten-years group.

Previous Firms

Table IV shows the previous firms of the sample of present employees of the yard. Table V gives the same information for a sample of about the same size of new employees ('new starts') who joined the shipyard during 1952. The previous firms are divided between shipbuilding firms (in Glasgow and other parts of the Clyde) and firms outside shipbuilding (in Glasgow and other areas). There is also a balancing category of those who came from school and the armed forces.

TABLE IV

PREVIOUS FIRMS OF SAMPLE OF PRESENT EMPLOYEES OF A SHIPYARD AT 1st JULY 1953

Occupation	Shipbuilding Firms		Outside Shipbuilding		School and Forces	Not given	Total
	In Glasgow	Other Clyde	In Glasgow	Other areas			
Joiners	10	6	8	3	5	1	33
Electricians	2	3	10	2	3	—	20
Plumbers	6	2	12	6	2	2	30
Sheet iron workers	3	1[1]	7	—	—	4	15
Welders	7	1	5	3	—	3	19
Shipwrights	3	1	4	1	1	3	13
Smiths and riveters	6	—	3	—	—	4	13
Platers	11	1	1	2	2	5	22
Other skilled trades	4	1	11	2	—	6	24
Redleaders, cranemen and stagers	3	—	6	—	—	7	16
Platers' helpers	2	—	7	1	—	4	14
Unskilled	8	1	25	12	1	4	51
Boys and apprentices	—	—	5	2	15	—	22
Women	—	—	6	—	—	2	8
Total	65	17	110	34	29	45[2]	300

[1] Shipbuilding firm in England.

[2] The somewhat high figure of 'not given' reflects the fact that most of those recorded as '10 years and over' in Table I are listed by the firm as having 'many years'' service and their place of previous employment is not given. This applies to 41 out of the total 45 here shown.

The definition of a shipbuilding firm used here is extremely narrow; it includes only builders of ships and excludes marine engineers and

all ancillary industries (though it includes some ship repairers who are equipped to do complete refits). As a result, the tables measure the extent to which the labour force has come from other firms actually building ships, and not the extent of the labour force's previous association with shipbuilding in any capacity. For example, this definition excludes several people whose previous firms had been insulators almost certainly engaged exclusively on shipbuilding work. These other firms may at present be associated with shipbuilding but could possibly find markets elsewhere.

TABLE V

PREVIOUS FIRMS OF SAMPLE OF NEW EMPLOYEES JOINING A SHIPYARD IN 1952

Occupation	Shipbuilding Firms		Outside Shipbuilding		School and Forces	Total
	In Glasgow	Other Clyde	In Glasgow	Other areas		
Joiners	12	1	15	3	—	31
Electricians	—	3	15	4	1	23
Plumbers	5	2	14	12	—	33
Sheet iron workers	3	1[1]	5	2	—	11
Welders	5	2	1	3	—	11
Shipwrights	7	2	5	1	—	15
Smiths and riveters	—	1[1]	—	—	—	1
Platers	11	3	1	3	—	18
Other skilled trades	5	1	5	2	—	13
Redleaders, cranemen and stagers	3	—	5	2	—	10
Platers' helpers	6	—	13	—	—	19
Unskilled	9	1	25	9	2	46
Boys and apprentices	1	—	17	2	24	44
Women	—	—	10	—	—	10
Total	67	17	131	43	27	285

[1] Shipbuilding firms in England.

In both tables the proportion who had come from shipbuilding firms is less than one-third. The proportion appears to be highest in those trades mainly associated with shipbuilding, such as platers (though this is less marked in the sample of present employees than it is in that of new starts). Electricians and plumbers are mainly drawn from other industries; so are the unskilled and women. Boys are mainly from school or other industries.

About one-quarter of those who have come from other yards (in both samples) have come from yards outside Glasgow. Not surprisingly, it is the skilled groups who seem prepared to do this. There is, on this evidence, some truth in the concept of the Clyde as a single labour area for shipbuilding; but the ties between the different Glasgow yards may be stronger than their links with those down the river. Again, about one-quarter (in both samples) of those who have come from firms outside shipbuilding are from outside Glasgow. A small number of these are men who have returned from oil refining work in different parts of the country. Plumbers and their labourers are most affected, but some platers and welders are also men who have returned from this work.

The similarity between the results for the sample of present employees and those from the sample of new starters is striking. The present labour force of the yard appears to be a fairly good sample of the total labour force from which it is drawn. This suggests that the pattern of previous firms of new starters is not a new development, and that the labour market in which shipbuilding competes, and from which it draws its labour, is normally much wider than the industry itself.

Areas of Residence

Tables VI and VII show the location of the homes of workers in relation to the position of the shipyard. This gives some measure of the extent to which the areas nearest the yards have become peculiarly associated with them. It also gives some idea of the extent to which the labour market is local, and how closely the workers have identified themselves with their work in the location of their homes. Table VI analyses the areas of residence of present employees, and Table VII analyses those of new starters in 1952. There is little difference in the pattern presented by these two tables.

The most striking thing about both the tables is the evidence of the number of employees who come from the area immediately adjacent to the yard and on the same side of the river—the number who are 'living on the job'. Over one-third in each sample come from this area. About half come from this area plus the adjacent areas on the same side of the river. The effect of post-war new housing is shown by the appearance of a number of the workers (though as yet a fairly small number) in the new housing schemes on the same side of the river. The river appears to act as a barrier to employees —though not an impassable one. Only about one-third as many live in the adjacent and fairly close areas on the other side of the river as live in the equivalent areas on the same side. The numbers coming

TABLE VI

AREAS OF RESIDENCE OF SAMPLE OF PRESENT EMPLOYEES OF A SHIPYARD AT 1st JULY 1953

Occupation	Area of Residence[1]								Total
	A	B	C	D	E	F	G	H	
Joiners	10	4	1	2	1	2	10	3	33
Electricians	2	2	4	2	4	3	2	1	20
Plumbers	9	2	3	3	—	9	2	2	30
Sheet iron workers	8	1	2	1	—	2	—	1	15
Welders	7	2	1	1	—	3	2	3	19
Shipwrights	9	—	—	—	3	—	—	1	13
Smiths and riveters	8	2	—	—	1	—	2	—	13
Platers	8	2	2	4	1	2	1	2	22
Other skilled trades	5	3	2	1	1	6	1	5	24
Redleaders, cranemen and stagers	10	1	—	—	—	4	—	1	16
Platers' helpers	6	3	—	—	—	5	—	—	14
Unskilled	23	6	3	4	1	13	—	1	51
Boys and apprentices	8	1	3	3	1	6	—	—	22
Women	4	1	—	—	—	3	—	—	8
Total	117	30	21	21	13	58	20	20	300

[1] The areas of residence may be grouped as follows:—

A Immediately adjacent and on same side of river.
B Fairly close and on same side of river.
C New housing development on same side of river.
D Immediately adjacent but on opposite side of river.
E Fairly close but on opposite side of river.
F Other parts of the city.
G Port Glasgow, Greenock or Clydebank.
H Other towns in various directions and at different distances which are not principal shipbuilding towns.

from the other shipbuilding towns on the Clyde again give some evidence of a common Clyde labour market, but the link does not appear to be remarkably strong.

Further analysis by occupations does not produce any very definite additional impressions. Unskilled workers and women seem to be the most definitely locally resident, while skilled trades seem to scatter more over the city. It may be that unskilled workers seek a convenient

job near their home while skilled workers are prepared to market their skill in any part of the city; or that skilled workers are better

TABLE VII

AREAS OF RESIDENCE OF SAMPLE OF NEW EMPLOYEES JOINING A SHIPYARD IN 1952

Occupation	Area of Residence								Total
	A	B	C	D	E	F	G	H	
Joiners	11	2	1	1	5	8	2	1	31
Electricians	1	—	—	3	4	12	2	1	23
Plumbers	7	2	3	5	2	7	6	1	33
Sheet iron workers	3	2	—	1	—	3	1	1	11
Welders	6	—	—	1	1	1	2	—	11
Shipwrights	5	1	—	4	3	1	—	1	15
Smiths and riveters	—	1	—	—	—	—	—	—	1
Platers	1	2	2	2	—	5	3	3	18
Other skilled trades	3	1	1	5	1	2	—	—	13
Redleaders, cranemen and stagers	5	1	1	1	—	2	—	—	10
Platers' helpers	11	—	—	2	2	4	—	—	19
Unskilled	23	6	2	—	2	13	—	—	46
Boys and apprentices	18	6	7	3	2	8	—	—	44
Women	10	—	—	—	—	—	—	—	10
Total	104	24	17	28	22	66	16	8	285

able to choose and maintain houses away from the yards and to pay the travelling expenses.

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NOTE ON THE STATISTICS

Some explanation of the classifications used in the tables is necessary. The *occupational* classification used consistently throughout the tables is in general uncomplicated, except by the question how to classify helpers, discussed in Table I, n.1, and by a few rather marginal occupations where an arbitrary decision has been made (*e.g.*, platers' machinemen have been included with platers; burners have been included with welders). The *previous firms* classification puts only those clearly previously associated with a shipbuilding firm into the first group; those whose previous employment has been with

marine engineers or with ancillary industries have been classed as 'outside shipbuilding'. The *areas of residence* classification (described in Table VI, n.1) has been based on postal districts which have been allocated to the various categories with the aid of a map. The towns in category H differ in their distance from the yard. They are not principal shipbuilding towns (like those in category G) so that residence in them is presumably a matter of choice and not an indication of previous association with a shipbuilding firm in that town. The classification of previous firms and of areas of residence used in Tables V and VII is consistent with that used in Tables IV and VI.

Table I is based on a record of the numbers employed by occupation in each week of the year 1952.

Table II is based on the employee record for the first week in 1952 and on weekly abstracts by occupation of the number of 'new starts' and numbers paid off in each week in 1952. The annual average of weekly turnover given in the last column of this table should be treated with considerable caution and as giving only the roughest of indications of the magnitudes involved, both for reasons associated with the statistics themselves and because of difficulties in the concepts involved. In fact Table II is undoubtedly the least satisfactory of the tables here presented, for the following reasons:

(i) As mentioned in Table II, n.2, the two sets of records used do not cover quite the same groups of people, the number of new starters and of workers paid off covering the larger group. Moreover, the figures of workers paid off and starting work include a number of persons transferred to and from other parts of the firm, from repair work or the engine shops. A further source of confusion (especially and predominantly in the case of boys and apprentices who have been promoted) is the alteration of occupational status within the firm. This is not reflected in the figures, and for boys and apprentices there is a far greater excess of new starters over the number paid off than can be reconciled with the employment figures for this group. Finally, it is not clear how the case of those new starters who do not last a week is dealt with in the statistics.

(ii) Where the average number in employment is variable—both in total and by occupation (as Table I indicates in this case)—the number of new starters and workers paid off can differ considerably, so that a different result will be obtained depending on which is used. In view of this, it was felt advisable to take the figures of change in the labour force as the number who were paid off and replaced by new starters in the year or, alternatively, as the number

of new starters who were in replacement of men paid off (according as the figure for new starters or for workers paid off was the lower); and to compare these with the employment position at the beginning of the year rather than with average employment. The percentages resulting from the comparison are therefore rough measures of the change in the labour force, assuming that its total size and occupational composition was the same at the end as at the beginning of the year, *i.e.*, eliminating fluctuations in employment.

(iii) The figures of change are derived from weekly data and therefore the annual figures represent the result in a year of the average rate of change per week. Turnover figures invariably reflect the movement at the margin where people are constantly coming and going. The magnitudes vary according to the period selected for compilation of data: if the period is a month, then those people who have come and also gone during the month are not shown, and exceptionally rapid marginal movement (which might appear in weekly figures) is eliminated. Weekly turnover figures, therefore, tend to be larger than others (*e.g.*, than the Ministry of Labour monthly turnover data).

Tables III, IV and VI are based on a 1 in 10 sample of current employee record cards in the shipbuilding yard at 1st July 1953. Every tenth card was selected, except that where the tenth card was a transfer from another department of the firm (repair, engine shops), the next following card was taken as an alternative, and the number of women appearing in the sample was reduced by accepting alternative cards. A few additional cards were selected at random to make the total up to three hundred. The total and the totals for occupations given by the sample differ from one tenth of the figures given by the employment record used for Table I for four principal reasons:

(i) The occupational structure in the intervening period altered, as might be expected. In particular, there was a marked increase in the number of finishing trades employed. Hence total employment is greater.

(ii) The employment record is a record of persons normally associated with shipbuilding and omits a number of ancillary occupations. The record cards from which the sample was drawn include a number of women ship cleaners, canteen assistants, shorthand typists, clerks, and a few tradesmen and other persons, all of whom are attached to the yard for record purposes but are not included in the weekly employment abstract. The sample was therefore drawn from a larger population than that given in the

employment record, but it was deliberately biased to exclude these ancillary employees wherever possible.

(iii) Particularly in the figures for the smaller occupational groups, sampling errors and the chances of being selected have operated to produce results slightly at variance with the composition of the total population.

(iv) A few cards were selected to make the sample up to three hundred.

Tables V and VII are based on a 1 in 4 sample of the record of addresses, occupations and previous firms of all new starters in the shipyard during 1952. Where the fourth name was a transfer or a re-engagement the next name was selected as an alternative. The number of different occupations appearing in the sample reflects the frequency of new starters by occupation and not the proportion of different occupations currently employed in the yard. As with the employee record cards (used for Tables III, IV and VI) the new starters record includes ancillary occupations (such as ship cleaners) and this too is reflected in the composition of the sample.

THE FOUNDING OF THE GLASGOW CHAMBER OF COMMERCE, 1783

Glasgow claims the distinction of being the first city in the United Kingdom to have established a Chamber of Commerce. Its first meeting was held on 1st January 1783. Important as this event was, it would be wrong to imagine that it marked an entirely new departure, for before this merchants and manufacturers frequently held meetings to discuss matters of common interest. Professor Redford has shown[1] that the founding in 1794 of the Manchester Commercial Society was preceded by that of various other organisations whose purpose was sometimes to represent the interests of the local business community.

I

After the union of 1707, when Scots members of Parliament moved from Edinburgh to Westminster and when the Scots Privy Council ceased to function, the Convention of Royal Burghs was the only body qualified to represent the interests of the burghs, which, in effect, meant the commercial interests of the nation.[2] Each royal burgh, except Edinburgh, which sent two, was entitled to send one commissioner to the annual Convention, at which all manner of economic matters were discussed, from road and bridge building to the encouragement of industry and the organisation of overseas trade, for the royal burghs had a monopoly of trade to the staple port of Campvere in Holland. Sometimes committees were appointed for special purposes, and representations might be made to Parliament or to the Crown. The Convention of Royal Burghs thus provided a forum for the business community and actively promoted the economic interests of the country. It was a national body, but its minutes show that local merchants and manufacturers frequently held meetings when important matters of common interest demanded action. Such meetings generally made representations to the Convention itself.[3]

Another national body, though of a different kind, was the Board of Trustees for Manufactures, established by Act of Parliament in 1727. Provided with funds for the promotion of its objects, it devoted

[1] *Manchester Merchants and Foreign Trade,* 1794-1858 (Manchester, 1934).

[2] On this subject see Theodora Keith, *The Convention of the Royal Burghs of Scotland* (Glasgow, 1926).

[3] *Extracts from Records of the Convention of the Royal Burghs of Scotland,* 1759-79 (Edinburgh, 1890), *passim.*

most of its attention to the development of the linen industry, the premier industry of Scotland in the eighteenth century. Its minutes and reports, now deposited in H.M. Register House, Edinburgh, show with what care the Trustees pursued their grand object of promoting manufacture, agriculture and fisheries in Scotland. The Board also provided a link between economic interests and the Government. Frequently petitions were presented to it from interested parties, and it in turn made direct representations to Parliament or to the Crown.

It is not surprising, therefore, that there was no formal organisation of merchants and manufacturers in Glasgow before the founding of the Chamber of Commerce in 1783. Nevertheless, general meetings were sometimes held for special purposes, and in some industries there were organised groups. In April 1778, for instance, when several bills[4] were before the House of Commons for extending the trade of Ireland, the Glasgow merchants and manufacturers held a meeting to protest against measures which they believed 'would have a fatal effect upon the commerce and manufactures—and consequently upon the landed interest' of the country.[5] The Glasgow West Indian merchants, who appear to have had a formal group, sent a vigorous letter to the chairman of the London merchants, urging opposition to the direct shipment of sugar from the Colonies to Ireland.[6] Much to the annoyance of the Glasgow merchants, who had meanwhile consulted with colleagues in Liverpool and Greenock, the London merchants decided to take no action.[7] Paisley and Kilbarchan merchants and manufacturers also took joint action, but their view was that the Irish bills would 'promote the industry, trade, wealth and population' of the country. The Convention of Royal Burghs appointed a committee to examine the matter and representations were received from merchants in Glasgow and Aberdeen.[8]

In the following year a proposal to admit the importation of French cambrics at a nominal duty caused great consternation in the

[4] It was proposed to free Ireland from many of the restrictions imposed by the Navigation Acts. Thus all goods (except tobacco) from the Plantations might be exported direct to Ireland, and Irish goods, except wool and woollen manufactures, might be admitted freely to the Plantations. Certain Irish goods, like sackcloth, cordage and cotton yarn, were to be admitted into Great Britain.

[5] *Scots Magazine*, XL (Edinburgh, 1778), 388.

[6] Letter Books of Alexander Houston & Company (MS. Nat. Lib. of Scotland), Home Letter Book No. 2, 18th March 1778. Alexander Houston and Co. were general merchants and shipowners, trading principally with the West Indies, where they had agents on almost all the inhabited British Islands. Three folio letter books of this firm, 1776-1781, are in the National Library of Scotland.

[7] *Ibid*, 7th May 1778.

[8] *Scots Magazine*, XL (1778), 388-9.

west of Scotland.[9] This industry had made considerable headway in Glasgow and Paisley and was said to give employment to 30,000 people. About the same time the Commissioners of Supply and Freeholders of the Shire of Renfrew instructed their member of Parliament to 'use his vote and interest' to prevent the bill from being passed.[10] In Edinburgh the cambric manufacturers also organised opposition to the projected measure.[11]

It was thus not unusual for sectional interests to take united action when circumstances required. In some cases more formal organisations existed, as in the case of the sugar merchants, who had a West India Club,[12] or the tobacco manufacturers, who had a Society of Tobacco Spinners.[13]

II

On the initiative of Patrick Colquhoun, tobacco merchant and Lord Provost of the city, steps were taken in the autumn of 1782 to found a Chamber of Commerce and Manufactures in Glasgow.[14] It is no coincidence that this step was taken at a critical time in the history of the city and indeed of Scotland. Ever since the 1720s Scotland, and particularly the Clyde, had played an important part in the tobacco trade with the Plantations and in the re-export of tobacco to France and the Low Countries. Aided by the Navigation Acts which decreed that tobacco must be carried in colonial or British ships and be brought to Britain before despatch to any other market, Glasgow merchants rapidly expanded their business. The importation of tobacco rose from 33m. lb. in 1765 to 47m. lb. in 1771. Over the same period the official value of imports from North America rose from £423,885 to £611,583, and of exports to North America from

[9] *Glasgow Mercury*, 11th March 1779. The *Caledonian Mercury* reported: 'Last Saturday some hundreds of weavers in Anderston [Glasgow] paraded through that place with the effigy of Lord North on horseback, holding in one hand a piece of French cambric, in the other the bill for importing that commodity' (18th March 1779).

[10] *Glasgow Mercury*, 8th April 1779.

[11] *Ibid*, 18th March 1779.

[12] *Ibid*, 12th October 1780.

[13] 6th November 1783. The Society of Tobacco Spinners in Glasgow, instituted in the early eighteenth century, was originally an association of private individuals for the charitable purpose of relieving the distress of its members. On 17th September 1779 it was given a charter or Seal of Cause by the city magistrates. By this time it included people outside the trade. (*Session Papers*, Vol. 350[2], Signet Lib., Edinburgh.)

[14] There is a complete set of minutes in the offices of the Chamber in Glasgow. The Secretary, Mr. Thomas Cameron, O.B.E., F.C.I.S., kindly gave me permission to examine the early volumes. George Stewart, formerly librarian to the Chamber, published privately in 1883 a volume entitled *Progress of Glasgow*, based on the minutes.

£185,734 to £375,511. A high proportion of the tobacco so imported was re-exported. Thus, of the 47m. lb. imported in 1771 no less than 45½m. lb. were re-exported. In that year home-produced manufactured goods represented only £503,473 out of a total of £1,857,334, the rest being accounted for by the re-export of tobacco and a certain amount of other goods, such as rum, sugar and cotton wool.[15] Many Glasgow merchants acquired great wealth in this trade. Collectively they constituted an important social class and were generally known as 'the tobacco lords'. They built for themselves fine town mansions and some bought estates. They played a decisive rôle in civic affairs. For many a long day the names of some of them were household words in the city of Glasgow. There was John Glassford, who at the height of his power owned 25 ships and was reputed to carry on trade to the extent of half a million sterling per annum; there was Andrew Buchanan, whose name is perpetuated in Buchanan Street; there was Alexander Houston, James and Colin Dunlop, and a host of others. Not only was tobacco by far the largest item in Scotland's overseas trade, but contacts with America provided a stimulus to industrial development at home. The linen industry, centred mainly in the counties of Angus, Perth and Fife, found in the Plantations its chief overseas market. Hosiery, household goods, hardware, glass and leather goods are among the other important exports at this time.

The Scots economy, thus intimately bound up with that of the Plantations, received a rude shock when the colonists decided to break with the home country. The official value of imports fell from £504,573 in 1774 to £95,596 in 1776 and of exports from £260,033 in 1774 to £71,560 in 1776. The trade in tobacco suffered most severely in 1774. Imports fell from 45,863,154 lb. in 1775 to 7,423,363 lb. in 1776 and to 295,000 lb. in 1777. Between 1775 and 1778 total imports fell by 42 per cent. and exports by 37 per cent.[16]

It is clear that the American War administered a rude shock to the whole Scots economy, but its effects were not felt immediately. When hostilities began Scotland was rapidly recovering from the depression of 1772-4. In July 1776 the *Caledonian Mercury* reported that trade had never been so brisk.[17] Fortunes were being

[15] Customs 14 (MS. Public Record Office, London).
[16] P.R.O. Customs 14.
[17] A letter from Glasgow reads: 'Never was trade so brisk as at present. The loss of the American trade has been of great advantage to the merchants of this place. Fortunes will be made by the advance of tobacco and other American goods, of which a great store is still on hand. At the same time, every manufacturer has more orders for goods than he can complete for 3 months to come' (15th July 1776). On 4th September it was reported that 'the demand for goods from the British West Indies Islands this year exceeds those of any former years; and great quantities of them are sent from thence to the French, Spanish and Dutch islands'

made as a consequence of the rapidly rising price of tobacco. Before the war tobacco had been selling at 3d. per lb.; by September 1776 the price had reached 6d. per lb. Two months later the wholesale price was 2/- per lb. Coming events had cast their shadow before, and for a number of years tobacco merchants had been exporting as much as they could from the Plantations.[18] When the war came they were sitting with bulging warehouses and the prospect of a steep rise in prices. Meanwhile the demand for manufactured goods by the West Indies was higher than ever before. On top of this there was, of course, the war demand for ships, men and materials. Even a year later it was recorded in the press that trade was flourishing and that the demand for manufactured goods was immense.[19]

In the closing months of 1777, however, there were signs of a recession in economic activity. Over the year (November 1776 to November 1777) production of linen cloth had increased by almost $1\frac{1}{4}$ million yards, an increase 'greater than at any time since the institution of the Board'. 'At the same time,' the Trustees reported, 'complaints have been received of late from different quarters of the country, of an uncommon stagnation in the sale of almost every species of linen.'[20] The output of cloth fell from 14,793,888 yards in 1777 to 12,867,237 in 1779. The production of stockings, hardware, glass, leather goods and a host of lesser manufactures suffered depression, while the market for sugar, tobacco and cotton rapidly deteriorated.[21] The war situation, if it was not the main cause of the depression, contributed to the general gloom. American privateers openly harassed shipping round the coasts of Scotland, while in October 1777 the British forces suffered heavy defeat at Saratoga. This was followed several months later by the entry of France into

[18] 'Scarcely a week has passed but some vessels have arrived with tobacco, indigo, tar, rice, etc.,' writes the *Caledonian Mercury*, 'so that it is computed we have received well nigh the value of a million sterling within these eight months bygone: In the single article of tobacco alone we have imported about £650,000 stg. worth. At the same time the demand for our different manufactures is so great, the prices of most kinds have advanced, and hands cannot be got to complete the commissions from England and Holland' (20th May 1775).

[19] *Caledonian Mercury*, 8th December 1777.

[20] Board of Trustees MSS. (Register House, Edinburgh) Reports, 1777, p. 104.

[21] The Houston Letter Books, 1776-81, provide a commentary on this period. Complaints of a break in prices appear first in October 1777, and throughout most of 1778 there is constant reference to depressed markets and scarcity of money. A letter dated 27th May 1778 to their agent in Tobago puts the situation thus: 'Mr. Lincoln's cotton is still on hand, that article is a perfect drug—Sugars are also become unsaleable, the chief occasion of which is a great and general scarcity of money over all the three kingdoms, we believe the like was never known before and all export trade is in a manner at an end, which creates much distress.' (Foreign Letter Book No. F, 25th May 1778.)

the war. The latter event complicated trade with the West Indies and added to Scotland's economic difficulties. Thus the years 1778 and 1779 witnessed stagnation of trade. There were numerous bankruptcies, the greatest being the important tobacco firms of Buchanan, Hastie & Co. and Andrew Buchanan & Co., both of whom were planters as well as exporters.[22] But most merchants, whether they had plantations or not, had large assets in the colonies, for the usual custom was to barter manufactured goods for tobacco.[23] At the beginning of 1775 Glasgow merchants claimed to have over a million pounds' worth of property and debts due to them in the Plantations. By August, however, more than half of this had been repatriated. 'What is owing to this country,' said the *Caledonian Mercury,* 'is now very trifling.'[24]

Trade with the Colonies did not come to an abrupt end when the war began. Rather did it change direction. The export of linen cloth to the northern and middle colonies, for instance, fell to nil, but export increased considerably to Nova Scotia, Florida and the West Indies, especially to Antigua, Granada and Jamaica. Moreover, by 1779 New York was once more figuring in the trade returns, and in the following years so were South Carolina and Georgia. For a number of years before the outbreak of war trade with the West Indies had been on the increase. In 1762, for instance, the official values were £48,762 for imports and £68,148 for exports. Ten years later the corresponding figures were £127,918 and £60,541. By 1775 they were £136,521 and £83,220. Sugar and cotton bulked largely in the imports.[25] In the west of Scotland, as in Lancashire, cotton was being used along with linen. Though it may well be that some pure cotton goods were then being made, the probability is that most cotton was used in the fine linen trade for making the weft, leaving the stronger flax for the warps. At this time plans were afoot to start machine-spinning and in 1778 the first mill in Scotland was set going at Rothesay. In the eighties there was a boom in cotton and numerous mills were started, including the well-known mills at Stanley and Deanston in Perthshire, at New Lanark and Blantyre in Lanarkshire,

[22] *Edinburgh Advertiser,* 16th January 1778.

[23] Messrs Spiers, French & Co., merchants in Glasgow, described the method thus: 'Goods are purchased in this country which are fit for the Maryland market, and being sent out there are lodged in the different stores belonging to the Company which are situated in different parts of the country. Over all of these stores is appointed a factor whose business is to receive the goods, to purchase tobacco from the planters in Maryland and to give in payment of the price of tobacco such goods or effects of the company as the factor may have on his hands.' In 1778 this company had effects in Maryland totalling £30,000 (*Session Papers,* Vol. 190, 21st January 1780).

[24] 1st February, 19th August 1775.

[25] P.R.O. Customs 14.

and at Catrine in Ayrshire. In short, a new and important textile industry was added to the already well-established linen industry.

The American War of Independence thus struck Scotland at a time when her economic activities were becoming more diversified, though still heavily dependent on the manufacture of linen and the import and re-export of tobacco. The Declaration of Independence put an end to the privileged position which Scotland enjoyed under the Navigation Acts. Clearly, if the war ended in the victory of the colonists, Scotland would lose her place as entrepôt of the tobacco trade. It was fortunate for Scotland that at this time new avenues of trade and commerce were being established and that much capital released from the tobacco trade was available for new enterprises.

III

Under such conditions as these the Glasgow Chamber of Commerce was promoted. The war had taken a decisive turn in 1780 and with the capitulation of Yorktown in October of the following year the end was in sight. What more natural than that the Glasgow merchants should take concerted action to repair the ravages of war on their accustomed lines of commerce and to seize the new opportunities for economic advancement which lay within their grasp? Negotiations for peace, which occupied the major part of 1782, created a favourable atmosphere for the formulation of such a plan. In October the proposal to have a Chamber of Commerce was discussed at a meeting of merchants and manufacturers from Glasgow, Paisley, Greenock and Port Glasgow and evidently was well received. This was followed by an advertisement in the local press inviting membership from those 'who had not already become members of the Chamber of Commerce and Manufacturers and who inclined to promote that useful institution'.[26] The objects of the Chamber were:

> 'to promote and improve such branches of trade as are peculiar to this country—to establish local rules for the convenience and assistance of foreign and inland traders and manufacturers—to discuss all memorials and representations from members of the Chamber, in matters regarding trade—to afford them assistance and relief in negotiating public business—to assist in procuring redress in any grievance, hardship or oppression, affecting any particular branch of trade or manufacture—to consider all matters respecting the corn-laws in this part of the united kingdom, for the purpose of supporting the industrious poor; and in general, to take cognis-

[26] *Glasgow Mercury*, 31st October 1782

ance of every matter and thing in the least degree connected with the interests of commerce and manufactures '.[27]

The first meeting was held on 1st January 1783, when Patrick Colquhoun was elected chairman, James McGrigor, wholesale linen dealer, vice-chairman, and Gilbert Hamilton, merchant and agent for Carron Company, secretary. Membership of the Board shows the predominant interests represented. Of the 30 members 7 were tobacco merchants, 4 were Virginian and West Indian merchants, 6 were linen merchants and manufacturers, 2 were thread manufacturers and 1 was a hosiery manufacturer. Of the 216 members of the whole Chamber, 168 were from Glasgow, 23 from Paisley, 16 from Greenock, 7 from Port Glasgow and 2 from Kilbarchan.

A perusal of the first minute book, covering the years 1783 to 1800, shows that the Chamber was interested primarily in raising the standard of goods produced for sale and in bringing pressure to bear on the Government to ease the burden of taxation, to reduce tariffs on a reciprocal basis and to eliminate illicit trading and smuggling. On these matters it corresponded with merchants in London and with the Chambers of Commerce of Bristol and Liverpool. Representations were made to the Board of Trustees for Manufactures and to the Convention of Royal Burghs, and pressure was brought to bear on the Government through local M.P.s or deputations sent to the House of Commons.

The first subject that interested the Chamber was the state of the thread industry.[28] Established in Paisley in the first quarter of the eighteenth century, this industry had made good progress, perhaps for the reason that it was not subject to regulation and control. Nevertheless, the absence of common standards of weight and quality was felt to be a disadvantage. The matter was raised by a Paisley thread manufacturer who urged the enforcement of regulations by Act of Parliament. This, on the face of it, might appear a retrograde move and would suggest that the Chamber was not alive to the new currents of economic thought which favoured freedom rather than regulation. On the other hand, it might be urged that in the existing state of capitalism there was a clamant need for accepted standards of discipline and conduct. Economic advancement demands not only capital, skill and enterprise but also the broad acceptance of codes of business behaviour. At this time there existed many undesirable practices, like evasion of duties, smuggling, short weight, inferior quality and the like, which are usually associated with an early phase of industrialism. The Chamber was in fact alive to these defects of

[27] *Scots Magazine*, XLIV (1782), 712.
[28] Glasgow Chamber of Commerce Minute Book, 8th January, 1783.

the economic system and its early efforts were directed to their elimination. Though the Board of Trustees had laid down that the name of the manufacturer should be clearly displayed on every parcel of thread and that uniform standards of measurement should be accepted, the regulations were not being observed. Accordingly, on 8th January 1783, the Chamber appointed a committee to look into this matter, which, after making inquiries both in Scotland and in London, reported in favour of the enforcement of uniform standards of quality and measurement by Act of Parliament, in order, it said, 'to preserve the reputation acquired by this country for integrity of character and perfection of manufacture'. The manufacturer's name and address, it recommended, should be distinctly marked on the cover of each parcel.[29] These recommendations adopted by the Chamber were approved by the Convention of Royal Burghs and the Board of Trustees and eventually a bill was promoted in the House of Commons to give them legal sanction.[30]

In the case of other textiles the Chamber showed equal zeal. The manufacture of linen was, of course, by far the largest industry in Scotland and the supervision and encouragement of the industry had long been the special concern of the Board of Trustees. In the Glasgow area manufacturers concentrated on the finer qualities of linen, known as cambrics and lawns, for which they required the fine yarns of France and Flanders. The Chamber, however, was not satisfied with this state of affairs and a committee was appointed 'to consider the proper method of raising fine flax and spinning it into yarn for cambrics and lawns'. In August 1783 it recommended high premiums for growing 'proper flax' and the establishment of a spinning school in Glasgow for teaching the 'true French way of spinning'.[31] These recommendations were approved by the Board of Trustees and put into operation.[32] On 13th April 1784, and again on 2nd February 1785, the Chamber returned to the question of quality of yarn and spoke in no uncertain terms of the frauds and abuses that were common. Though the Board of Trustees had inspectors, a good deal of corruption apparently existed and the Chamber urged the appointment of more and better-paid inspectors of good character and integrity.

Already, however, the cotton industry was taking firm root in Scotland. The first reference to it in the minutes of the Chamber occurs in April 1784, when in a memorial to the Board of Trustees

[29] *Ibid*, 14th October 1783.
[30] *Ibid*, 13th April 1784; 2nd February 1785.
[31] *Ibid*, 5th August 1783.
[32] *Ibid*, 14th October 1783.

reference is made to 'a new and rising manufacture in this country'. 'The muslin branch,' it reports, 'is now introduced and extending very rapidly and with it the spinning of cotton yarn.' Since frauds in cotton yarn were very common and not readily recognisable, it was urged that the linen regulations should be extended to include cotton.[33]

The Chamber also showed an interest in the spinning inventions which were then being adopted by the industry. Surprisingly, there is no reference in the minutes to Arkwright's visit to Glasgow in 1785 or to the subsequent setting up of the famous New Lanark mills in the following year. But the Chamber was certainly alive to the importance of the cotton industry, which, it was said, 'without public aid has taken deep root in Scotland'.[34]

In 1784 the younger Pitt presented his first post-war Budget. Faced with a great increase in the debt charge, he proposed a series of new taxes which aroused quite a storm in Lancashire and in Scotland. The Glasgow Chamber was specially hostile to the proposed taxes on coal, silk gauze and printed linens and cottons. The last-named, generally referred to as the Fustian Tax, aroused the fiercest opposition, for this was a department of industry which had made remarkable progress. It was perhaps more in sorrow than in anger that the directors declared their alarm 'that a blow so fatal to it should originate with that legislature to which they have been accustomed to look up for protection'.[35] A few weeks later some thousands of weavers assembled on Glasgow Green to register their protest,[36] while in the following month the manufacturers of cotton and muslin in Glasgow and its neighbourhood, not content with the protestations of the Chamber of Commerce, held a special meeting at which several strongly-worded resolutions were passed, denouncing the heavy taxes and forecasting the ruin of their trade unless the duties were repealed.[37]

Fuel was added to the agitation early in the following year when the Irish Parliament adopted certain resolutions which were warmly received by Pitt in the House of Commons. Their implementation would have the effect of reducing trade barriers between Britain and Ireland and throwing open a large part of the colonial trade to Ireland. Indeed they went a long way towards establishing free trade between the two countries. Their hostile reception throughout the manufacturing districts of the country was formidable indeed. Glasgow joined

[33] *Ibid*, 13th April 1784.
[34] *Ibid*, 24th January 1786.
[35] *Ibid*, 8th July 1784.
[36] *Glasgow Mercury*, 29th July 1784.
[37] *Scots Magazine*, XLVI (1784), 446-7.

with Lancashire and London in bringing pressure to bear on Pitt and the House of Commons.

On the day Pitt introduced the subject at Westminster the Glasgow Chamber held a meeting at the request of the Paisley manufacturers, when alarm was expressed at what were called the Irish Resolutions.[38] Three weeks later the Chamber adopted a resolution declaring the Irish Resolutions 'so far from being conducive to a fair equitable system of commerce and interchange of manufactures, by establishing that equality and reciprocity so essential to a firm and lasting union . . . that they would prove not only highly injurious to many of the manufactures of the country but a perpetual source of jealousy and dissension between the two nations'.[39] It is significant that the directors spoke of 'equality and reciprocity', and that the Paisley manufacturers declared that they would work for 'free intercourse, upon liberal principles, between Great Britain and Ireland by abolishing all duties and prohibitions or by a low duty *ad valorem* upon principles of reciprocation'.[40] Apparently the criticism of the Irish Resolutions was that the concessions went too far in favour of Ireland, and that the duties on the import into Ireland of handkerchiefs and other Scottish products were much too high. A petition embodying the Chamber's resolution, signed by some 4,000 people, was despatched to London and a meeting was held with Pitt but no concessions were made.[41]

Nothing daunted, the Glasgow deputation joined with the Manchester representatives to carry on the agitation, while at home a meeting of manufacturers decided to petition the House of Lords.[42] The result was that when the Bill reached the Statute Book little was left of the original proposals. The united opposition of the manufacturing and commercial interests thus registered its second victory, for the Fustian Tax which had aroused so much opposition in the previous year had been repealed in April 1785.

This agitation against the heavy taxation of manufactured goods had an important sequel. In February 1785 Josiah Wedgwood, representing the pottery interests, wrote to Matthew Boulton suggesting the formation of 'a Committee of Delegates from all the manufacturing places in England and Scotland to meet and sit in London'. The original intention was to oppose the Irish Resolutions, but at a meeting held in London on 14th March 1785 the decision was taken to

[38] Chamber Minutes, 22nd February 1785.
[39] *Ibid*, 11th March 1785.
[40] *Glasgow Mercury*, 17th March 1785.
[41] Chamber Minutes, 12th April 1785.
[42] *Glasgow Mercury*, 16th June 1785.

form a permanent organisation, to be called 'the General Chamber of Manufacturers of Great Britain'.[43] Whether this action on the part of the English inspired Scots merchants to take similar steps to co-ordinate their efforts is uncertain, but in November 1785 a plan to establish a Chamber of Commerce and Manufactures for Scotland was put forward by David Stewart, banker in Edinburgh. At a general meeting in December a constitution was adopted. After reference to 'the present spirit of trade and of rising manufactures which actuates the country', the Introduction to the Rules of the General Chamber of Commerce went on:

> 'It must be obvious that a Society of Merchants and Manufacturers with united liberal views may be highly useful to commerce. They may as a body establish plans and systems that may greatly contribute to improvement and check others that might be detrimental, but which, as individuals, they would neither have planned nor had ability to execute.'[44]

Membership was thrown open to any merchant, manufacturer or trader residing in Scotland, but in point of fact the original 118 members were drawn mostly from Edinburgh and its neighbourhood, though there were a few from across the Forth at Kirkcaldy and Dunfermline. Perhaps because of its limited appeal it was decided in February 1786 to change the name to 'the Chamber of Commerce and Manufacturers in the City of Edinburgh'.

Just at this time the government was negotiating what came to be called the Eden Treaty. The objective was to open up trade with France by reducing tariffs and dismantling the many restrictions of long standing which checked the free flow of goods and people from one country to another. The proposal caused great controversy up and down the country and the discussions that were carried on reveal the new temper of the manufacturing classes. As these were confident of their capacity to meet foreign competition in the home market and eager to extend overseas markets for their products, the proposal was generally welcomed, especially by the new and growing industries.

While the treaty was under consideration the Glasgow Chamber of Commerce appointed a committee to report on the proposals so far as they affected the manufacture of lawn and cambric. The Committee was somewhat apprehensive of the effects of the proposed treaty but when their report came before the directors, the latter

[43] Redford, *op. cit.*, 9.

[44] Through the courtesy of Mr. W. V. Stevens, B.Com., J.P., Secretary to the Edinburgh Chamber of Commerce, I have been permitted to consult the early minute books.

took a much more sanguine view,[45] and the result was that the Chamber welcomed the movement to free trade. The treaty was signed on 26th September 1786. In the following month the *Glasgow Mercury* reported that a business house in France had sought to open commercial dealings with some of the principal gauze manufacturers in Paisley. 'We hope to hear of many similar applications from that quarter for the manufactures of this country,' the paper goes on, 'and that trade will flourish beyond what it has done in any former period. The loss of America will thus be little felt.'[46] The *Scots Magazine* quoted with approval a passage from the *Wealth of Nations* where Adam Smith had proclaimed the advantages of a freer commerce with France.[47]

When the Glasgow Chamber met on 24th January 1787 the directors recorded their satisfaction with the Eden Treaty. 'It appears,' they said, 'to be formed upon the most liberal principles and with extensive views of commerce,' and they expressed approval of its leading principle:

> 'which, at the same time that it holds forth ample protection to the fair trader, withdraws temptation to illicit trade . . . but, authorising an interchange of the best products of either country upon easy duties, it will imperceptibly direct the industry of each to its natural and most beneficial channels'.

They went on to argue in favour of the extension of the Treaty to other manufactures, such as hosiery, and particularly to the trade in food:

> 'As the very existence of our manufactures rests upon cheap labour, we hope the same liberal system will be extended to a general free trade in grain, which, besides increasing the navigation of this country, will secure to our labourers a steady and plentiful supply of the great necessity of Life.'

From its foundation the Chamber was interested in the Corn Laws. Indeed, one of its original objects was 'to consider all matters affecting the Corn Laws of this part of the United Kingdom in particular, as being of the utmost consequence to its trade and manufactures'. Representing the commercial and industrial community, the directors were primarily interested in cheap food and that at times brought them into conflict with the landed interest. One such occasion occurred in 1787. At that time the importation of corn was governed by a Statute of 1774, the most recent of a long series of enactments dealing

[45] Glasgow Chamber Minutes, 24th January 1786.
[46] 19th October 1786.
[47] *Scots Magazine*, XLVIII (1786), 521: *Wealth of Nations*, ed. Edwin Canaan (1, 459-60).

with this subject. According to this Act importation was permitted when prices fell below a stipulated figure, but in its operation each maritime county acted quite independently. Thus one county might permit importation while another kept its ports closed.[48] In the summer of 1786 a move was made to change this practice. At a meeting of landowners held in Edinburgh in August 1786 it was proposed that importation should be governed by Midlothian prices only. A similar proposal had already been made in 1773 and had aroused a storm of protest, especially from the Glasgow merchants and manufacturers. In a memorial to the Convention of Royal Burghs they declared:

> 'The memorialists beg leave to call the attention of all ranks of men to this important observation, that whenever provisions are plenty and cheap, manufactures flourish: whenever they are scarce and dear, manufactures decay. And the true cause of the present flourishing state of manufactures, in every part of Britain, is the plenty and cheaper price of provisions.'[49]

When the proposal was revived in 1786 the reaction was no less vigorous. 'The newspapers have for some time past been filled with resolutions of manufacturers and others against the scheme,' wrote the *Scots Magazine*.[50] On 10th October 1786 the Glasgow Chamber of Commerce considered the Edinburgh proposals, and at a special meeting held a week later they adopted several strong resolutions. The most significant ran:

> 'that at a time . . . when commercial treaties are forming, founded upon reciprocal import duties, that state alone can expect a preference to an introduction of its manufactures into other states, where the skill and industry of its manufacturers is aided by cheapness of labour, the certain consequence of plentiful supplies of provisions at reasonable rates'.

The resolution was given wide publicity in the local press and in the *Scots Magazine*. The subject continued to agitate the Chamber and at its meeting on 2nd January 1787 the whole question was carefully considered. Having reviewed the history and operation of the Corn Laws, the directors came down heavily against the Edinburgh

[48] *Ibid*, XXXIX (1777), 198-203, gives an account of the Corn Laws as they applied to Scotland.

[49] *Ibid*, 572.

[50] *Ibid*, XLVIII (1786), 515. *The Glasgow Mercury* reported meetings of protest from Greenock, Paisley, Port Glasgow, Hamilton, Glasgow, Kilbarchan, etc. 'The plan for altering the said law . . . is selfish, illiberal, destructive of commerce and manufactures, particularly in this western district,' said the Paisley Town Council. The Hamilton resolution declared the proposals 'ruinous to its manufactures; and, of course, highly detrimental to the landed interest'. (26th October, 2nd November 1786.)

proposal, which, they said, by restricting importation from Ireland, would raise the price of food in Glasgow by from 10 to 15 per cent. They believed 'that the free import and export of grain and meal are the surest means of encouraging and promoting the prosperity of the nation', and so they declared they would 'use all legal means' to prevent the adoption of the proposal.[51] The importance of the subject is revealed by the numerous references made to it at subsequent meetings of the Chamber. There were many reports, resolutions and petitions, all favouring the establishment of free trade in corn. The battle between the manufacturing and landowning classes was on.

Another subject which occupied a great deal of attention, at least at the early meetings, was the evasion of customs duties. In the autumn of 1783 this subject was foremost in the minds of the directors, and indeed of the main body of tobacco importers in the city. At a meeting on 17th December the chairman reported that, as a result of representations made to him, he had promoted an association of importers and manufacturers of tobacco to suppress and discourage smuggling. 28 Virginian merchants and 24 tobacco manufacturers were among its members. The directors decided to insert advertisements in Glasgow, Edinburgh and Aberdeen newspapers announcing their intention to oppose smuggling, to publish the names of any known to be concerned in this practice, and to refuse credit to any dealer or manufacturer who purchased tobacco illicitly imported. Any manufacturer not entering the association was 'to be considered a party to smuggling' and treated accordingly. A circular letter was sent to all the towns in Scotland asking for their assent to the resolution proposed. The Commissioners of Customs at Edinburgh naturally gave full support to this action, and a committee was appointed to carry the matter further.[52] Despite all these efforts the practice of smuggling did not abate, and a year later the directors recorded the 'alarming progress of smuggling tobacco', which former resolutions had failed to reduce. A committee was again appointed to go into the matter.[53] Its report, presented on 2nd February 1785, urged a reduction in the tobacco duty so that it would not pay to smuggle. The Chancellor of the Exchequer, however, did not accept this proposal.[54]

Towards the end of 1788 an interesting step was taken by the Chamber when it was decided to establish a Commercial Agent in

[51] Minutes, 2nd January 1787. Their views were communicated to the Edinburgh Chamber, which had favoured the proposal (Edinburgh Minutes, 13th December 1786; 3rd January 1787).
[52] Glasgow Chamber Minutes, 17th December 1783.
[53] *Ibid*, 13th September 1784.
[54] *Ibid*, 13th April 1785.

London. As one of their number, Patrick Colquhoun, proposed to settle in the metropolis, it was decided to appoint him to this office. The minute is worth quoting:

> 'that the commerce and manufactures of this country being now greatly extended, many new laws and regulations became necessary for the encouragement of useful industry, and that many things were daily occurring at the seat of government, interesting to some of the numerous bodies of traders and manufacturers in Great Britain, who from remote distance from the Capital and their inability often to act singly, might suffer considerable injury, and the country at large feel the effects of any depression of the trade, from hasty regulations or laws not adapted for the general good . . . [therefore] as Mr. Colquhoun . . . proposed settling in London as a public Commercial Agent upon a large and extensive plan' it was resolved to appoint him Commercial Agent for the Chamber.[55]

Not satisfied with the backing of his Glasgow colleagues, Colquhoun approached the Edinburgh Chamber, but after full consideration the directors decided to take no action since they already had a satisfactory agent in London.[56]

The Glasgow Chamber of Commerce, whose early history we have recounted, was but the forerunner of many similar Chambers in the United Kingdom. Its establishment did not mark an entirely new departure, for long before, as we have seen, merchants and manufacturers had taken united action for common purposes. What was new now was that a body was created which was representative of all economic activities in Glasgow and district. It was able to view the whole economic situation and when appropriate take action on behalf of any industrial or commercial activity. By reason of its representative character it was in a position to take broad views. Running through its deliberations one can detect the formulation of a new approach to economic affairs, an approach which emphasised a faith in freedom from restraint and a desire to seek independence rather than the protection of the state.

H. Hamilton

Aberdeen

[55] *Ibid*, 12th November 1788.
[56] Edinburgh Chamber Minutes, 10th December 1788; 7th, 21st January 1789.

STABILITY OF MEMBERSHIP IN TRADE UNIONS

I

HIGH rates of labour turnover are nowadays generally regarded as a significant cause of inefficiency in industrial firms and as an important symptom of discontent or apathy among their staffs. The success which has attended this particular application of the concept of 'turnover' has aroused interest in its possible value for the analysis of the membership records of institutions such as trade unions. Mere changes in the size of unions as registered in net annual percentage increases or decreases in membership are, it is argued, uninformative. An apparent year-to-year stability in membership may be the deceptive reflection of high, but approximately equal, rates of enrolments and lapses. An impressive increase in membership in a single year may mask an even more dramatic influx offset by an appreciable total of lapses. It is to the realities of 'turnover' and away from the façade of absolute membership figures that attention must be turned.

The suggestion is tempting, and much of the evidence already adduced appears impressive. In his study of the Transport and General Workers' Union, misleadingly entitled *The Government of British Trade Unions*,[1] Joseph Goldstein showed how, over the period 1935-47, while the average annual net increase in membership was only 9·4 per cent., the average annual rate of enrolments was 38·3 per cent. and of lapses 33·3 per cent.[2] In the single year 1942 a net increase of 19·5 per cent. concealed an inflow rate of no less than 51·2 per cent. and an outflow rate of 42·1 per cent. Barou's figures for the Amalgamated Engineering Union in 1944[3] afford an example of how misleading can be the appearance of a relatively unchanged membership total. A net decrease in membership of only 1 per cent. was the result of a 19 per cent. rate in enrolments and a 20 per cent. rate in lapses.[4]

Results such as these would certainly seem to justify Barou's opinion that 'the problem deserves urgent investigation and reflection'.

[1] Allen and Unwin, 1952. See Chapter 5, 'The Membership Turnover'.

[2] Goldstein measures enrolments as a percentage of the membership at the end of the current year, and lapses as a percentage of the membership at the end of the previous year.

[3] N. Barou, *British Trade Unions* (Gollancz, 1947), p. 40. The reference is a slight one and I should certainly not include Dr. Barou as one of the targets for the criticism which follows.

[4] Barou calculates both enrolments and lapses as percentages of the membership at the end of the previous year.

A thoroughgoing study would, however, require to consider a long period of years so as to allow for variations in the economic, political and social climate,[5] and to embrace a number of unions of different structural types from a variety of industries. Such a task, considerable in itself, is made infinitely more difficult by the paucity of reliable material. With trade unions as with business firms the keeping of adequate records of turnover is by no means universal. Goldstein's assertion that, prior to his study, 'the only figures available on the size of membership for any major union have been total membership and the net annual decrease or increase in size'[6] is an exaggerated claim, but it remains true that a really comprehensive research project on the subject of trade union membership turnover would be a somewhat daunting proposition. Would the effort involved prove to have been warranted by the quantity and value of the results obtained?

Whether or not the mere volume of information obtainable would be likely to represent an adequate return on the labour expended could only be determined by a diligent review of the material. In any case it is the less important aspect of the question. The more relevant consideration is whether or not there attaches to the very concept of 'trade union membership turnover' the significance it is so often assumed to possess, and which, superficially, it does possess. A closely related point is whether or not figures of total membership and the net annual increase or decrease in them are so largely irrelevant as Goldstein and others would have us believe. Might they not, on the contrary, be capable of shedding light on some, at least, of those problems of trade union organisation which turnover statistics could be expected to illuminate? With these matters this article proposes to deal.

II

The presumed importance of statistics of trade union membership turnover can best be described by recalling the analogy between them and the figures of labour turnover in industrial firms. A high rate of labour turnover has significance both as cause and as effect. Its causal rôle lies in its relation to industrial efficiency. An increase in labour turnover multiplies the administrative problems of management, increases expenditure on training, and tends to lower productivity by upsetting the smooth and established routine of

[5] For the significance of changed economic conditions for rates of labour turnover, see H. Behrend, 'Absence and Labour Turnover in a Changing Economic Climate', *Occupational Psychology*, Vol. 27, No. 2, April 1953.
[6] Goldstein, *op. cit.*, p. 71 n.

operation expected from a settled team of workers accustomed to one another's ways and methods as well as to the techniques of their jobs. On the other hand, a high rate of labour turnover is the outcome of maladjustment, apathy or discontent among the employees, and represents, in part at least, a failure of the firm to imbue its workers with a sense of loyalty to itself.

This distinction is certainly an over-simplification. Not only do inefficiency and low levels of output result from high rates of labour turnover; they are an important factor in stimulating that discontent from which excessive turnover springs. Indeed, one of the more unfortunate complications of a condition of high labour turnover is that it is likely to be self-perpetuating or even self-intensifying. The distinction has, nevertheless, considerable analytical validity. An individual manager, faced with the problem of excessive labour turnover, would have to begin somewhere in his search for a remedy. He would normally, it is suggested, regard the absence of a sense of loyalty to the firm as the causal factor to be corrected, and improved efficiency as the goal to be attained. For salvation he would look to improvements in the selection, training and 'welfare' of his employees rather than in equipment or productive techniques more narrowly defined.

In the same way, a high rate of membership turnover is claimed to have a dual significance for a trade union. On the one hand, it makes union administration much less straightforward. The 'steady' members, man for man, are much less trouble than the 'ins' and 'outs'. Organisational campaigns are often needed to recruit new members, who have then to be furnished with cards and other documents. When members leave the union there may be work involved in their transfer to other organisations, in the attempt to trace them and retain their interest, or in a prolonged chase after arrears of subscriptions of which their final lapsing is only the culmination. Moreover, most of the work of a trade union represents the voluntary effort of its members. A high rate of membership turnover means not only that there is, in total, a greater burden of work, but also that it is likely to be borne by a relatively smaller proportion of 'steady' and enthusiastic members. To a trade union a high quota of new and transient members offers reduced prospects of well attended branch meetings, of ease in filling the numerous honorary positions within its system of government, and of discovering and training its future leadership.

But, it is argued, a large membership turnover is not only a cause of difficulties and, perhaps, inefficiency in union administration, or of apathy and reduced participation among the members: it is also

the evidence and result of these things. To put it bluntly, it means that the union is falling down on its job, that it is failing, in Goldstein's words, to make its members into 'active trade union citizens'.[7] Just as high labour turnover reflects the failure of industrial managements to inculcate a sense of loyalty to the firm, so high membership turnover means that trade unions are not succeeding in making their members 'feel a sense of belonging to the organisation which they have joined as a condition of employment'.[8]

The first half of the argument, that high membership turnover intensifies the problems of trade union government, can readily be accepted. The second half, that its existence reflects adversely on the union's adminstration and work, is, however, the one on which Goldstein and others have laid by far the greater stress, although it is certainly much more debatable. Here it is proposed to advance, in ascending order of importance, three arguments which challenge this point of view.

The first is obvious and already admitted by Goldstein,[9] but it will be as well to restate it here in more definite fashion, both for the sake of completeness and so that its full significance may not be overlooked. Whatever effect turnover as expressed in the rate of enrolments may have in complicating the work of the union, it has, clearly, no or very little relevance to the argument that high rates of turnover are evidence of the union's failure properly to cater for the interests of its members. An organisation can scarcely be criticised for its success in attracting new recruits! Of course, the maintenance over long periods of years of high percentage rates of turnover in terms of new members probably means that the core of 'stable' membership is being augmented only slowly, if at all, but this is only because the rate of lapses continues to be nearly as high as, if not higher than, the rate of enrolments. A high annual enrolment rate may be cited as *additional* evidence of membership instability, *once a high rate of lapses has been established,* but, by itself, it is no proof at all. The point has to be stressed because there is a danger, once a writer has come to attach great importance to membership turnover as evidence of a union's shortcomings, to slip in unguarded moments into the assumption that a high enrolment rate as such is something to be avoided. Thus Goldstein, despite his earlier disclaimer, writes: 'The union must redirect the energies of its organisers and its members in all units of organisation from the task of getting new members to that of making those already members

[7] *Op. cit.*, p. 80.
[8] Goldstein, *op. cit.*, p. 77.
[9] *Ibid*, p. 70.

aware of that fact and into active trade union citizens.'[10] This, as I shall hope to show later, seems to me to be the purest nonsense and to spring from a lack of understanding of the basic purposes of trade union organisation.[11]

The second argument is concerned with the fact that percentages of enrolments or lapses are simply a statistically convenient way of expressing turnover data. The figures for the Transport and General Workers' Union in 1942, for example, do *not* mean that 42·1 per cent. of those in membership at the beginning of the year had left the Union by the end of it, or that 51·2 per cent. of those who were members at the end of the year had joined during the preceding twelve months. The considerable numbers who join and leave a union, and sometimes perhaps then join again, all within the space of a single year, act as a 'multiplier' on turnover percentages. The pitfall is obvious and well known, but not all of those who advertise their awareness of it succeed, in the outcome, in avoiding it entirely. Thus Goldstein, in the very passage in which he draws attention to this danger,[12] permits himself to write: 'There is no doubt that there exists in the Union a relatively small but stable membership of many years' standing.' But whether it is 'relatively small' or 'relatively large' surely depends on how big the 'multiplier' is; the truth can certainly not be inferred from statistical rates of turnover alone.[13] The error reappears in Goldstein's elaborate formula for calculating the percentage of members eligible for office in the Union in any one year,[14] and leads him into a serious underestimate of the size of this potential 'ruling group'.[15]

[10] Goldstein, *op. cit.*, p. 80.

[11] It might seem best, in view of the argument of this paragraph, to follow the convenient practice generally adopted by writers on labour turnover and express membership turnover in terms of losses alone (*vide* P. Sargant Florence, *Labour*, Hutcheson's University Library, No. 25, pp. 43-47). With labour turnover, however, a statistical measure to take account of both incomings and outgoings can be found in, to quote Sargant Florence, 'the number of workers in a year leaving on their own account or discharged from their place of employment *and having to be replaced*, divided by the total number of workers employed there on the average for the year' (my italics). The idea of 'replacement' has of course little meaning in the discussion of trade union membership turnover, and, in so far as it has any, it simply reflects *labour* replacement!

[12] *Ibid*, p. 75.

[13] It is only fair to state that Goldstein does attempt to guard himself here by obtaining for one Area of the Union (in the absence of national figures) the numbers of new members who were, in fact, *rejoining* the Union. But one would also need to know the presumably larger number of those leaving the Union who had only joined it in the same year.

[14] *Op. cit.*, Appendix No. 5, pp. 278-80.

[15] For the detailed argument, see my letter in *Socialist Commentary*, October 1952.

Although the frequent incomings and outgoings of a relatively small floating membership may occasion as much administrative inconvenience to a union as would the number of 'genuine' lapses and enrolments required to yield the same *statistical* rate of turnover, they cannot be regarded as furnishing equally damaging evidence of the union's failure to develop a sense of loyalty to itself. In so far as our interest lies in membership turnover as a *causal* factor of strains and stresses in the organisation, crude turnover percentages are an acceptable and generally adequate index; in so far as it lies in the discovery of *evidence* of disloyalty or apathy, they are inadequate.

The third, and much the most important, argument can best be approached by pointing out that turnover in the membership of a trade union is, to a large extent, a derived phenomenon, dependent upon the rate of labour turnover in the industries and services which the union organises. To blame it upon defects in the union's structure, operation and methods is as absurd as would be the use of the high rates of passenger-turnover experienced on the average bus journey in an attempt to prove that the seats are uncomfortable.

A trade union's main endeavour is not to retain the allegiance of an individual Brother Smith or Sister Jones whatever happens to them, but to maintain or improve, quite irrespective of changes in the labour force, the high density of organisation it has already achieved in particular factories and other places of work, while seeking to extend its influence in the unorganised or poorly-organised plants which lie within its sphere of interest. Its primary function is to safeguard and ameliorate the conditions of the working lives of its members. Ultimately, its ability to do this depends upon its possession of a monopoly or near-monopoly of the supply of a particular type of labour and upon the extent of its political influence. Immediately, its bargaining power as against a particular employer depends upon how nearly it approaches 100 per cent. organisation among his workers. If the personnel of the factory changes, then a change in the membership of the union becomes not a sign of weakness but a condition of strength. Who rides in the bus is immaterial, provided that all who do so pay their fares.

That it should be necessary to weary oneself and one's readers by having once again to repeat these long-since proclaimed and elementary truths is evidence of the confusion into which the study of the structure and functions of trade unions threatens to fall if it becomes the happy hunting-ground for those who are equipped with a knowledge of statistical techniques and with theories derived

from the analysis of other forms of social organisation, but who lack a firm understanding of the fundamental purposes and reasons for existence of the organised labour movement itself.

III

Statistics of the membership turnover of trade unions are, then, helpful in indicating the extent of the special problems with which organisations burdened with a continuously shifting army of adherents are confronted. Unions would have nothing to lose and a great deal to gain from the keeping of comprehensive and detailed records of turnover and from the initiation of any practicable steps to reduce its incidence. Statistics of membership turnover—even of lapses only—are, however, quite misleading and inappropriate as indices of a union's success or failure in the fulfilment of its primary functions. Here the all-important test is the quite different one of whether or not the degree of organisation is high and stable.

Since the truth of this contention hinges so much upon the degree of dependence of membership turnover on labour turnover, it will be the more easily demonstrated if the elements of which a trade union's rate of lapses is composed can be distinguished one from another and given separate examination. For this purpose, a distinction will be drawn between the *sphere of effective organisation,* within which it is regarded as more or less 'the done thing' for workers to join a particular union, and the wider *sphere of eligibility,* within which the individual worker is entitled, by reason of his occupation or industry, to belong to the union in question and is not expected, by formal agreement or tacit understanding, to join, in preference, any other. The area which lies within the latter, but outside the former, will be referred to as the *poorly-organised sector.*

Lapses from membership of the union can now be classified as follows:—

1. *Members transferring outside the sphere of eligibility.*
   Let a = the fraction of workers employed within the sphere of eligibility who are trade union members;
   b = the fraction of workers so employed who transfer outside within the year;
   c = the fraction of workers so transferring who are trade union members.

   Then the fractional rate of lapses in membership $= b\left(\frac{c}{a}\right)$.

The rate of lapses is seen to depend upon (1) the rate of labour turnover (b) between the sphere of eligibility and the rest of industry,

and (2) the ratio between the share of trade union members in that turnover (c) and the density of organisation (a). The rate of labour turnover can be taken as outside the union's control; the ratio $\frac{c}{a}$ can only be influenced by agreements which stipulate that non-unionists are discharged first, agreements more likely to be obtained when the density of organisation is high.

2. *Members transferring from work within the sphere of effective organisation to work within the poorly-organised sector.*

The rate of lapses will depend upon factors analogous with those operating in the preceding case, namely (i) the percentage rate of labour turnover between the sphere of effective organisation and the poorly-organised sector, and (ii) the ratio between the share of trade union members in that turnover and the density of organisation within the sphere of effective organisation. But it will now also depend upon (iii) the success the union has in retaining the allegiance of the members who move, and (iv) the original distribution of membership between the sphere of effective organisation and the poorly-organised sector.[16] Because of this last factor, it might be thought that the rate of lapses would be reduced by an increase in the relative size of the poorly-organised sector. The rate of labour turnover between the two sectors will, however, tend also in practice to be influenced by their relative sizes. Where the well-organised nucleus is relatively small, and the poorly-organised periphery relatively large, the rate of labour turnover between the former and the latter, and hence the rate of lapses, will be inflated. This factor is likely greatly to outweigh any opposite effect under (iv) above. In addition, the higher the degree of organisation a union has attained generally, the greater would seem to be its chances of success in holding on to its members when they transfer to less well-organised plants.

To conclude, then, we can say that labour turnover is not so all-important a factor under this as under the previous heading, and

[16] Let a = the fraction of workers employed within the sphere of effective organisation who are trade union members;
b = the fraction of workers so employed who transfer within the year to work in the poorly-organised sector;
c = the fraction of workers so transferring who are trade union members;
d = the fraction of trade union members so transferring who remain in membership;
e = the ratio of trade union members in the whole sphere of eligibility to members within the sphere of effective organisation.
Then the fractional rate of lapses in membership

$$= \frac{bc - bcd}{ae} = b.\frac{c}{a} \cdot 1\text{-}d.\frac{1}{e}.$$

that the union bears more responsibility for any loss of membership. The density of organisation it has achieved will, however, provide a reliable measure of its potential success in reducing its rate of lapses.

3. *Members leaving the union without moving to a less well-organised sector.*

This element in the rate of lapses can be further analysed into:—

(i) members leaving the union without change of job;

(ii) members leaving the union on transfer within the sphere of effective organisation;

(iii) members leaving the union on transfer within the poorly-organised sector; and

(iv) members leaving the union on transfer from a job within the poorly-organised sector to one within the sphere of effective organisation.

Obviously, labour turnover still has some importance here. It seems reasonable to contend that members are more likely to be lost if they move, even between equally well-organised places of work, than if they stay where they are. Losses through movement under (iv) above are likely to be ridiculously small or non-existent, nor will they be very great under (ii), but they may well be considerable under (iii).

If, however, labour turnover still increases the difficulty of retaining members, the union clearly cannot be absolved from responsibility for losses under any of the headings in this category. Membership turnover of this particular type would, if the figures could ever be produced, furnish evidence for an indictment of the union concerned. Once again, however, it seems most probable that the higher the density of organisation the less likely will a union be to lose members in this way. Losses under (iii) above will be reduced if the poorly-organised sector is small, and the strong social pressure to belong to the union, which will accompany membership densities of nearly 100 per cent. within the sphere of effective organisation, will minimise the rate of lapses under (i), (ii) and (iv) also.

To summarise our findings, labour turnover is the factor almost exclusively responsible for loss of membership in the first of the three categories, is an important factor in the second, and an aggravating, but not fundamental, factor in the third. Unfortunately, it is not possible to gauge the relative contributions of the three categories to the total of lapses in trade union membership, although statistics of transfers between unions would, if available, help to assess the importance of the first. It seems, however, safe to conclude that overall rates of turnover in trade union membership, quoted without

further analysis, are so far governed by rates of labour turnover as to possess little independent value.

This conclusion is reinforced when account is taken of the 'multiplier' in turnover statistics. If we were to assume for the moment that our three categories of losses of membership covered only 'once-and-for-all' movements within the year of workers between jobs and of trade union members out of their organisations,[17] then we would have to provide a fourth category—the 'multiplier group' of repeated lapses from the union within a single year by the same individuals and of lapses by those who have only joined within the same year. Now, it seems most probable that such lapses and repeated lapses will be the consequence of repeated changes of job rather than of any tendency for members in regular employment to play hide-and-seek with the union. This factor will, therefore, tend to increase the *statistical* importance of the labour turnover element in membership turnover figures.

There is plenty of other evidence, even among the sparse available statistics of trade union membership turnover, to point in the same direction. Unions mostly of semi-skilled and unskilled workers, like the Transport and General Workers', appear to show higher rates of membership turnover than unions of skilled craftsmen. Within the Transport and General Workers' Union the highest rates of membership turnover are among its members in the building trade group.[18] In this and in other unions, turnover seems to have been at its highest during the war and immediate post-war years. Whether one compares different occupations, different industries or different dates, trade union membership turnover seems to be high where labour turnover is high.

Our analysis does not only, however, suggest the comparative uselessness of membership turnover as an index of trade union success or stability; it suggests also that the 'real' rate of lapses (with the element of labour turnover eliminated) will be low when the density of organisation is high. We have already seen, by argument from the fundamental purposes and methods of a trade union, that the most relevant criterion of its success which membership statistics afford is the extent to which it has attained a high and stable degree of organisation. Now we can also feel reasonably certain that, in choosing this criterion, we shall not be sacrificing anything that would have been gained by the use in its stead of a refined index of membership turnover.

[17] The three categories can, of course, be taken as quite comprehensive, *i.e.* already inclusive of the 'multiplier element'.

[18] Goldstein, *op. cit.*, pp. 77-8.

IV

Readers who have some knowledge of the inadequacies of trade union statistics may be forgiven if they now conclude that, in rejecting membership turnover and pinning our faith to the degree of organisation, we have extricated ourselves from the wilderness of irrelevance only to tread the primrose path of wishful thinking. Percentage densities of organisation would, indeed, seem to represent highly appropriate but unattainable indices of trade union strength. Union officials usually know, at least in general terms and perhaps even precisely, how effective is their organisation among the employees of a particular plant or firm, and for guidance in their practical day-to-day work this may well be sufficient. Few unions, however, could estimate at all closely the percentage of workers within their sphere of eligibility whom they have enrolled. Nor does it help to try to generalise the problem and to discover what proportion of the workers within a given industry are members of trade unions. Many unions, especially but by no means exclusively the general workers' organisations, operate in a variety of industries and estimates of their membership in each are not normally obtainable. All that can be said with assurance is restricted to such statements as ' trade union membership is almost universal among coal-miners ', ' skilled craftsmen are more highly organised than workers in the less skilled grades ', or ' the degree of organisation is low in the distributive trades and almost zero in domestic service '. Such vague estimates are not altogether useless, but they add little to what can be learned from common-sense observation and provide a disappointingly low return to statistical endeavour.

Our concern is, however, with the *stability* of the degree of organisation over time as well as with its absolute height for individual industries in individual years. Although the intractability of the available figures makes it impossible to measure the latter with any degree of accuracy, we can make a worthwhile attempt at estimating the former. Moreover, information about the stability of the level of organisation may tell us something about the level itself. The preceding analysis of the rate of lapses has suggested that in unions where the degree of organisation is high it is likely also to be stable. If we discover at the end of our investigation that the greatest stability is shown by unions in those industries which everyday observation tells us to be well-organised, then this will be a heartening indication that we are on the right track.

The material to be employed in assessing the stability of the degree of organisation is simply the much-derided absolute membership

figures of trade unions. These will be misleading as indicators of changes in the degree of organisation over long periods, but they will be tolerably reliable in measuring the extent of year-to-year fluctuations.[19] The numbers of workers employed in particular broad groups of industries seldom change at all drastically in a single twelvemonth, and such major changes as are known to have taken place can be discounted in interpretation. Generally a marked rise or fall within a single year in the absolute numbers of trade union members indicates a roughly parallel movement in the degree of organisation. There are, of course, other complications, such as amalgamation between unions whose memberships were previously included under different industries, but they should not, if the period during which annual fluctuations are analysed is sufficiently long, make much difference to the final result.

The membership figures used are those supplied by the Ministry of Labour, published annually in the *Gazette* and at intervals of several years in the 'Abstracts of Labour Statistics'. Comparable series are available from 1911 until 1947, when the new Standard Industrial Classification was adopted, with the exception (so far as analysis by industry is concerned) of the years 1914-17. The industrial classification has varied slightly from time to time, but complete and consistent series can be calculated for 19 broad groups of industries. It should be noted that, in the compilation of these membership tables, the *whole* of the membership of each union is assigned to the industrial group to which the majority of its members are believed to belong.

Comparative assessment of the fluctuations themselves raises a number of problems. The simple method of calculating, for each group of industries, the average annual fluctuation and then expressing this as a percentage of the average annual membership has all the attraction of the obvious, but the temptation must, nevertheless, be resisted. On a crude index of this kind, a hypothetical group of industries in which trade union membership was increasing throughout the period at a steady but fairly rapid rate would appear to show greater instability of organisation than one in which trade union membership fluctuated but slightly above and below some relatively constant, and quite possibly low, level of organisation. Again, a group of industries in which trade union membership declined slowly and steadily throughout the period would show up better than one which,

[19] This belief is confirmed by a comparison of the movement of absolute membership figures with the movement of the crude density percentages which can be calculated from them and from the number of insured workers in each industry.

at some point, made a dramatic and rapid recovery. The index chosen must not be restricted to measuring fluctuations as such; it must in some way differentiate between improvement and deterioration in the degree of organisation.

This greatly complicates the problem for, if we were to regard upward and downward movements as cancelling out one another, we would obviously only be measuring net increase or decrease of membership over the period. The frequency and extent of interim fluctuations would be dismissed as irrelevant, and secular growth or decline in the industries themselves would become a major determining factor.

What is needed is an interpretation of the concept of 'stability of organisation' to mean—as it must mean—something more than mere rigidity in the level of organisation. A successful trade union would be expected not only to retain the loyalty of its members when circumstances were adverse, but to improve its position in more congenial times. Trade union growth does not occur in isolation but in response to a whole series of changes in environment, of which changes in the level of employment, in the state of the law, in the location of political power and in the climate of public opinion are perhaps the most important. An adequate index of stability should, it would seem, be constructed in terms of some expected rate of growth which will vary from year to year in accordance with relevant changes in the environment.

Changes in the total membership of all trade unions in the United Kingdom will afford an accurate indication of this expected rate of growth. As a first approximation, instability could be measured in terms of the extent to which trade unions in individual groups of industries exaggerate the rates of change (upward or downward) exhibited by all unions. The use of such a test would, however, mean the awarding of as large a bonus to unions which continued to lose members even when trade union membership was increasing as to those which continued to expand in a climate generally unfavourable to trade union growth. The somewhat different method used here is to calculate four indices, three of which indicate instability and one of which is regarded as a compensating factor. The first three measure 'exaggerated increases', 'out-of-phase decreases' and 'exaggerated decreases'; the fourth measures 'out-of-phase increases'. The sum of the first three, *minus* the fourth, gives an index of instability.

It will be readily agreed that 'exaggerated decreases' and 'out-of-phase decreases' are evidences of instability but the case seems less clear with 'exaggerated increases'. Is it not commendable

in a union to be highly responsive to favourable changes in its environment? Three reasons can be urged for the opposite point of view. First of all, years in which total trade union membership expands are likely to see the greatest increase in unions which had previously attained only a low level of organisation and not in those which had already enrolled the great majority of workers within their chosen field. Secondly, there is a tendency in periods of general expansion of employment and of trade union membership for certain unions—and, notably, the general workers' organisations—to act as the recruiting vanguard of the whole movement, enrolling those new or less easily classifiable elements in the labour force to whom unions built on the craft or industrial models do not offer a ready welcome. This characteristic provides a source of future instability for, to shade into our third reason, the same elements are often the first to leave their unions when the period of expansion is over. An examination of membership trends over a period of years shows quite conclusively that 'exaggerated increases' and 'exaggerated decreases' are opposite sides of the same coin, affecting, in the main, the same organisations.

In constructing the index, the whole period was divided into years of increase and of decrease in total trade union membership. In the years of increase, the lower 'limit of stability' adopted for the trade unions within each industrial group was their membership in the previous year.[20] The upper 'limit of stability' was taken as the membership that would have been attained in the current year had the proportionate rate of growth equalled that of all unions.[21] The excess of the actual membership over the 'upper limit' was counted as 'exaggerated increase', the deficiency below the 'lower limit' as 'out-of-phase decrease'. The average annual 'exaggerated increase' and 'out-of-phase decrease' of the unions in each group in *the years of increase in total trade union membership* were then expressed as percentages of the average annual membership *in those years*.[22] A parallel procedure adopted for the years of decrease in total trade union membership furnished percentage indices of

[20] All membership figures were taken to the nearest thousand.

[21] For the years 1939-45 the membership figure for all unions used was the most recent available *that had been analysed by industries*. For each of these years revised total figures have been published, but not a revised industrial analysis.

[22] In computing the average annual membership of the unions in each group it was assumed that their memberships increased at a constant rate during the 'missing years' between 1913 and 1918. This seemed, on balance, preferable to the assumption that the memberships of all of them increased in each of these years at the same rate as total trade union membership.

TABLE I

INDICES OF INSTABILITY IN TRADE UNION MEMBERSHIP WITHIN 19 BROAD INDUSTRIAL GROUPS, 1911-47

Industrial Group	(a) Index of Exaggerated Increase	(b) Index of Out-of-Phase Decrease	(c) Index of Exaggerated Decrease	(d) Index of Out-of-Phase Increase	(e) Index of Instability (a+b+c−d)
1. Teaching	0·50	0·28	0·11	2·11	−1·22
2. Boot and Shoe	0·61	0·96	—	0·68	0·89
3. Paper, Printing, etc.	1·18	0·33	0·39	0·98	0·92
4. Railway Service	1·10	0·22	1·49	1·49	1·32
5. National and Local Government	2·05	0·53	0·10	1·32	1·36
6. Cotton (Preparing, Spinning and Manufacturing)	0·03	1·18	1·07	0·13	2·15
7. Coal Mining	0·36	0·18	2·78	0·83	2·49
8. Building, Woodworking and Furniture Manufacture, Public Works Contracting, etc.	2·68	0·44	1·03	0·40	3·75
9. Textile (other than Cotton Preparing, Spinning and Manufacturing)	1·64	0·91	1·91	0·57	3·89
10. Banking and Insurance	3·79	0·33	0·81	0·63	4·30
11. Water Transport	0·94	0·49	5·07	1·99	4·51
12. Commerce and Distribution	3·68	0·74	3·07	1·78	5·71
13. Metals, Machines, Conveyances, etc.	3·55	0·16	2·21	—	5·92
14. Miscellaneous Groups	3·98	1·23	1·48	0·16	6 53
15. Entertainments and Sports	6·72	1·29	2·44	3·55	6·90
16. Tailoring and Clothing (other than Boot and Shoe)	4·25	2·40	1·52	1·25	6·92
17. Pottery and Glass	5·42	2·63	2·99	0·50	10·54
18. Transport (Road, Dock, etc.) and General Labour	6·27	0·14	4·37	0·04	10·74
19. Agriculture, Horticulture, etc.	13·58	1·35	8·80	3·79	19·94

NOTES ON THE COMPOSITION OF THE GROUPS IN THE ABOVE TABLE

1. The category of 'Miscellaneous Groups' includes trade unions in mining and quarrying (other than coal) and in manufacturing industries not separately specified, as well as organisations of clerks, chemists, foremen, etc., which are not classifiable by industry.
2. The 'National and Local Government' group excludes trade unions of teachers, transport workers and general workers.

'exaggerated decrease' and 'out-of-phase increase' for each of the 19 groups.[23] The results are shown in Table I.

Regularity of employment (though not the secular decline or expansion of industries) has clearly much to do with the order of the groups in the above table, and must naturally be accepted as a major contributing factor to stability of membership. It cannot, however, be assumed to be the whole explanation, as the relatively exalted positions of coal mining, cotton and the building trades indicate. A more comprehensive interpretation is suggested if a line is drawn approximately half-way down the table, between textiles (other than cotton) and banking and insurance. Above it lie nearly all the traditionally well-organised groups of manual workers—boot and shoe operatives, printers, railwaymen, textile workers, coal miners, building craftsmen and woodworkers. (The railwaymen could hardly, it is true, have been called a traditionally well-organised group in 1911, but they are accepted as such to-day and have more than justified their claim to inclusion by their organisational behaviour in the interim.) Below the line, on the other hand, are to be found most of the groups of workers whose organisation into trade unions was first seriously undertaken at relatively recent dates and who have not, in general, attained even now the same high density of trade union membership as characterises the older groups. Agricultural workers, general workers, workers in road and water transport, in entertainments, in the distributive trades, in the banking and insurance worlds and in many of the minor manufacturing industries would appear to qualify under this heading. So also do workers in the tailoring and clothing and pottery and glass industries, where, despite the presence of comparatively small nuclei of traditionally well-organised skilled craftsmen, the unions as a whole exhibit strong membership instability.[24]

The performance of the various groups in terms of our index contains one serious disappointment. The four sections of the organised labour movement which dominated the trade union scene

[23] Although no change in the method of calculation is involved, it should be pointed out, in the interests of accuracy, that the two procedures are not wholly parallel. In years of declining membership of all unions, the lower 'limit of stability' for the unions in each group is the membership that would have been reached had their proportionate rate of decrease equalled but not exceeded that of all unions during the year in question. But the previous year's membership is not strictly speaking the upper '*limit* of stability' but merely a standard against which to check the extent of the compensating factor of 'out-of-phase increase'. Where the upper limit would be in years of decrease in total membership does not, fortunately, have to be decided for our purposes.

[24] Probably due in part to the large proportion of female members which they contain.

in the second half of the nineteenth century, and which would be expected to be the first to qualify for the description of 'traditionally well-organised', were the coal miners, the cotton operatives, the metal workers and the building craftsmen. Three of these groups do well, but 'Metals, Machines and Conveyances', which embraces the iron and steel workers, the engineers, shipbuilders, vehicle-builders and the minor metal trades, comes well down the list.

This weakness seems, however, to be capable of explanation by reference to two features of the development of the national economy during our period which affected this group of industries with particular intensity. The first, and more important in this context, was the participation of the country in two world wars, each of which naturally involved exceptional expansion of the metal trades; the second was the especially severe unemployment experienced between the wars by this and certain other sectors of industry. The marked changes in the numbers employed in the metal trades during our period do not seem to have been wholly eliminated from our reckoning by the year-to-year basis of the calculations. Although the figures are much too tentative to be reproduced here, crude estimates of the fluctuations in various groups of the percentages of workers organised in trade unions gives much more satisfactory results for 'Metals, Machines and Conveyances'. Moreover, there can be little doubt that the degree of organisation in the group is high, whatever may be the verdict on stability. On general grounds it would clearly be impossible to assign the unions in the metal trades to any but the traditionally well-organised category.

The unions in two of the industrial groups have so far not been mentioned. The associations included under 'Teaching' and 'National and Local Government' show both a stable and a generally high degree of organisation, but they differ from the other unions in the upper half of the table in some of the major characteristics of their development as well as by virtue of their being primarily associations of non-manual workers.[25] The distinctive character of their evolution is suggested by their high indices of 'out-of-phase increase' combined with their low indices for 'exaggerated decrease'. This evidence points to a remarkably continuous growth in membership, going ahead both in years that were 'good' and years that were 'bad' for the movement as a whole.

To this group of non-manual workers' unions it is proposed here, with some hesitation, to add 'Banking and Insurance' and, with

[25] The chief exceptions are manual workers' organisations in the local government service, notably the National Union of Public Employees.

rather more reluctance, 'Commerce and Distribution'. Bank clerks, insurance officials and agents and shop assistants clearly count as 'non-manual' workers, but their unions lack the apparent stability of those of the teachers, civil servants and local government employees. The 'Commerce and Distribution' group, moreover, consists chiefly of the modern Union of Shop, Distributive and Allied Workers, which can in many ways be regarded as a third great general workers' union. Nevertheless, it is proposed to include both groups here with the category of non-manual workers' unions on the grounds that, as a detailed examination of their membership data suggests, their years of serious instability were in the first half of our period and probably corresponded to a very early phase in their development. Since then they have not only shown improved, though not great, stability, but have also revealed the 'non-manual' characteristic of modest advances in their level of organisation even in years when trade union membership as a whole was falling.[26]

To sum up, the unions in our 19 broad industrial groups have been divided among three categories on the basis of their degree and stability of organisation and of the characteristics of development which they show.

A. *Traditionally well-organised groups of manual workers.*

Coal Mining.	Other Textile.	Building, Woodworking, etc.
Metals, Machines, Conveyances, etc.	Boot and Shoe.	Railway Service.
Cotton.	Paper and Printing.	

[26] Their indices for the two sub-periods, 1911-28 and 1928-47, were:—

	(a) Exaggerated Increase	(b) Out-of-Phase Decrease	(c) Exaggerated Decrease	(d) Out-of-Pnase Increase	(e) Index of Instability (a+b+c−d)
Commerce and Distribution					
1911-28 . .	8·32	0·51	6·89	1·53	14·19
1928-47 . .	1·66	0·83	—	1·98	0·51
Banking and Insurance					
1911-28 . .	17·59	0·31	0·34	0·17	18·07
1928-47 . .	—	0·34	1·34	1·15	0·53

B. *More newly-organised groups, mostly of manual workers.*[27]

Agriculture.	Water Transport.	Miscellaneous Groups.
Pottery and Glass.	Other Transport and General Labour.	
Tailoring and Clothing.	Entertainments and Sport.	

C. *Non-manual workers' groups.*

Commerce and Distribution.	National and Local Government.
Banking and Insurance.	Teaching.

This division is, of course, entirely separate from the well-known classification by structural type of trade unions into craft, industrial, and general organisations. It has little reference to their internal structural characteristics, but it does provide a useful tool for the analysis of their patterns of growth. To this we shall now turn.

V

Salient characteristics of the patterns of growth of each of the three categories can be investigated, as a first approximation, by using once more the index of instability employed above. The results for the whole period and for each of the sub-periods, 1911-28 and 1928-47, are given in Table II.[28]

The results for the whole period are the expected ones that Category B shows a much higher degree of instability than either A or C, and that Category C shows much the highest index for 'out-of-phase increase' and much the lowest for 'exaggerated decrease'. In 'increase years' Category A shows the greatest stability.

Comparison of the sub-periods reveals a number of new points of interest. The traditionally well-organised groups show much the same level of stability in both, such differences as there are arising largely from the secular decline of cotton, more pronounced after 1928, and the effects of war-time 'concentration' in causing an actual

[27] One of the component elements of this group, the unions in the entertainments industry, consists chiefly of non-manual workers. But all the apparent characteristics of organisation and development of this group align it definitely with category B.

[28] 1928 has been chosen as the year of division between the two sub-periods because (*a*) it stands approximately half-way between 1911 and 1947; (*b*) it gives in each sub-division one major and one minor period of increase in total trade union membership (1911-20 and 1924; 1933-47 and 1929); (*c*) it approximates to the era of the General Strike and its aftermath, in many ways a turning-point in the development of the British trade union movement.

decline in the membership of trade unions within a number of consumers' goods industries. The apparent improvement in stability of the non-manual workers' unions is mostly, as we have seen, a question of the changed pattern of development of the unions in banking, insurance and the distributive trades. More significant, as we shall see, is the greater stability of the unions in Category B, a change which affects not only the final index of instability, but also each of its constituent elements.

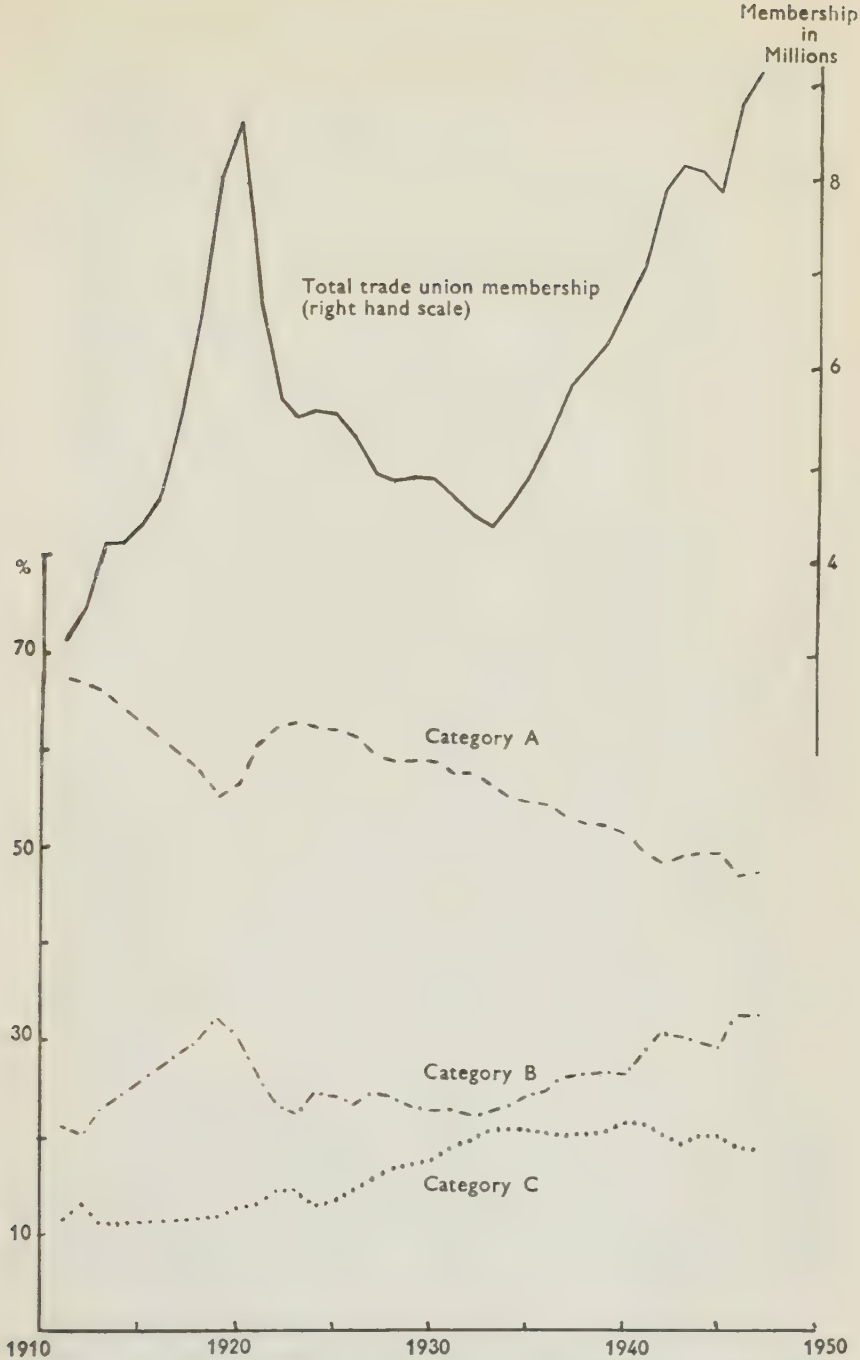
TABLE II

INDICES OF INSTABILITY IN TRADE UNION MEMBERSHIP BY THREE BROAD CATEGORIES OF UNIONS, 1911-47

	(a) Index of Exaggerated Increase	(b) Index of Out-of-Phase Decrease	(c) Index of Exaggerated Decrease	(d) Index of Out-of-Phase Increase	(e) Index of Instability (a+b+c−d)
Category A					
1911-28 . .	1·76	0·25	1·86	0·70	3·17
1928-47 . .	1·62	0·49	1·67	0·41	3·37
Whole period .	1·68	0·38	1·78	0·57	3·27
Category B					
1911-28 . .	7·38	0.74	5·40	0·20	13·32
1928-47 . .	4·92	0·39	2·64	0·91	7·04
Whole period .	5·87	0·52	4·13	0·53	9·99
Category C					
1911-28 . .	3·72	0·80	1·48	1·40	4·60
1928-47 . .	1·66	0·40	0·19	1·66	0·59
Whole period .	2·23	0·51	0·79	1·54	1·99

The three contrasting patterns of development are further illustrated in the accompanying chart, which shows the variations over the period 1911-47 in the memberships of the three categories of trade unions, expressed as percentages of the membership of all unions. As a background there has been sketched a graph to illustrate the rise and fall of total trade union membership.

A comparison between the percentage distribution of membership at the beginning and at the end of the period makes a convenient starting-point for analysis. Whereas the shares of Categories A, B and C in 1911 were in the ratio of 67 : 21 : 12, they were in the ratio of 48 : 33 : 19 in 1947. The change did not, of course, represent an absolute fall in the membership of the traditionally well-organised category (in fact it more than doubled), but the much more rapid



Percentage distribution of trade union membership in three categories, 1911-47.

growth of the newer unions in Categories B and C, each of which increased in membership by nearly five times.

There, however, the resemblance ends between the behaviour of the non-manual workers' unions and that of the more newly-organised groups of manual workers. The former, as the chart suggests, has been a case of almost uninterrupted growth, the latter of a 'two steps forward, one step back' kind of advance. The non-manual workers' unions as a group, as an examination of the Ministry of Labour's published statistics will show, increased their membership in every year from the end of 1924 to the end of 1947, with the solitary exception of 1945—and this through the greatest trade depression in history! In percentage terms, the chart reveals, their record was one of an advance from 1913 until 1934 which was interrupted only in 1924, and then by the accidental circumstance of the incorporation of the Municipal Employees' Association within the new National Union of General and Municipal Workers and the consequent transfer of its membership to our Category B. Since 1933 union membership as a whole has been increasing and the non-manual group, despite its own continued growth at a more rapid rate than formerly, has not quite maintained its percentage share. Its development during the present century has, however, assisted greatly in altering in significant fashion the composition of the trade union movement.[29]

The unions of the more newly-organised groups of manual workers, on the other hand, contained, by 1920, 30·6 per cent. of the whole strength of organised labour; by 1923, the percentage had fallen to 22·5 per cent., the 1920 peak not being regained until 1942 nor decisively passed until 1946. The 'percentage' graph of this group is, in fact, a good imitation of the 'absolute membership' graph for all unions. As our indices of instability have already indicated, the rises and falls in the membership of the Category B unions exaggerate the rises and falls in total trade union membership. The graph indicates, further, that this characteristic extends not just to the *fact* of growth or decline in total membership, but often also to the *rate*. It is when trade union membership as a whole is increasing most *rapidly* (in 1913, 1915-19, 1934-37, 1941-42 and 1946) that the exaggeration in the rate of growth of membership in Category B is most marked. Similarly, the rapid decline of 1920-22 in total membership was accompanied by a severe decline in the proportion of that membership organised in this category of unions. On the other hand,

[29] Had we been able to separate out from other groups, notably the 'miscellaneous' one, the membership of the non-manual unions which they contain, the percentage share of Category C in total trade union membership would have been appreciably higher.

it frequently happens that the rate of increase of membership of all unions needs only to *slow down* and the Category B percentage falls, or rises only slightly. This was true in 1912,[30] 1920, 1938-40, 1943 and 1947. As years of retardation in the rate of growth sometimes foreshadow, as did 1920 and 1943, the approach of a period of decline the 'percentage' graph of the Category B unions is given the appearance of acting as a sensitive barometer to changes in the trade union weather, reacting immediately and sharply to factors which cause an increase or decrease in membership as a whole. For the same characteristic can be observed at the end of a long period of trade union decline, like the 'twenties' and early 'thirties'. The curve of total trade union membership did not begin to turn upwards until 1934, but the Category B unions had already increased their percentage share in 1933.

The 'percentage' graph for the unions in Category A appears as almost the direct inversion of that for the unions in Category B. When the membership of all unions increases, the share in it of the traditionally well-organised groups of manual workers falls—and falls all the more quickly the more rapid is the rate of increase in total membership. Similarly, when the membership of all unions declines, the share of the Category A unions rises. These changes in the share of the traditionally well-organised groups in the membership of all unions are in the opposite direction to changes in their own absolute membership totals. The size of Category A expands and shrinks with the size of the whole organised labour movement, but nearly always at a slower rate. The marked exception to this pattern of behaviour is in the years from 1924 to 1933 when Categories A and B alike were losing ground to the non-manual workers' unions. Here two special factors were influencing the traditionally well-organised groups—the defeat of 1926 and its effects on organisation among the miners and the railwaymen in particular, and the severe impact of unemployment on cotton, coal, shipbuilding, iron and steel and other industries in this sector.

The conclusions to be derived from both the instability indices and the chart are unmistakable. The unstable element, the 'recruiting vanguard', and, unfortunately, also the 'lapsing vanguard', within the trade union movement is represented by the unions included within our Category B. This conclusion does not, however, imply any disparagement of the efficiency of these organisations as trade unions, for it has been their lot to assume the most difficult organisational task of all—the assimilation into the labour movement of groups of

[30] The percentage increase in total trade union membership in 1911 was 22·4 per cent.; in 1912 it was 8·8 per cent.

workers who, not so very long ago, were regarded as almost incapable of permanent absorption. Much the largest element in Category B is the membership of the general labour unions (the 'Other Transport and General' group claimed 2,203,000 of the 1947 total of 3,011,000), and the traditional conception of the rôle of these unions was precisely that of 'clearing houses'[31] for the original recruitment of the 'new' unionists, pending the adoption of more permanent forms of organisation. To some critics that is still their function. Thus Barou says of them:[32] 'These unions, which have played a great part in organising unskilled and semi-skilled labour, should continue their activities as spearheads of trade unionism for the enrolment of that great mass of British wage- and salary-earners who still remain outside trade union organisation.' They 'should, however, agree to hand over gradually to those unions, which will be rebuilt as industrial unions, those of their members who belong to the specific industry'.

The general labour unions can only counter these arguments by demonstrating that they have already, in fact, themselves developed an organisational framework within which the kind of workers they recruit can find an effective, purposeful and stable answer to their trade union aspirations. Their demonstration will rest mainly, of course, on non-statistical types of evidence—a recital of their achievements in improving the lot of the 'general' worker, in advancing their own status within the trade union movement, and in maintaining a relatively high level of efficiency in administration. But there is, as we have seen, statistical evidence, too, that the membership instability of these unions is much less marked than it was thirty or forty years ago. The chart on the whole supports that conclusion, although it is only fair to add that the trade unions have not, since the Second World War, been confronted with a test as severe as that of 1920-23. The qualification seems, however, less important and the achievement all the greater when one other factor is mentioned. In 1918 and 1920 the women members of the unions within Category B represented 18·0 per cent. and 13·3 per cent. respectively of their total membership; in 1942 and 1947 they represented 28·8 per cent. and 18·9 per cent. respectively. Now, the female element within the trade union movement fluctuates much more than does the male. If we use our original technique to calculate an index of instability for the whole of the female membership of trade unions, the results are as given in Table III.

[31] The phrase is from G. D. H. Cole, *The World of Labour* (1913), p. 240.

[32] Barou, *op. cit.*, pp. 215-16.

TABLE III
INDICES OF INSTABILITY IN THE FEMALE MEMBERSHIP OF TRADE UNIONS, 1911-47

	(a) Index of Exaggerated Increase	(b) Index of Out-of-Phase Decrease	(c) Index of Exaggerated Decrease	(d) Index of Out-of-Phase Increase	(e) Index of Instability (a+b+c−d)
1911-28 . .	6·74	0·12	1·27	0·34	7·79
1928-47 . .	4·36	0·15	3·23	—	7·74
Whole period .	5·14	0·14	2·28	0·16	7·40

In a comparison of the results for the whole period with those for the 19 industrial groups in Table I it will be seen that women members of trade unions, taken as a separate industrial group, would come fourth from the foot of the list, a position which appears the more remarkable when it is added that only in 1942-43 did the Category B unions contain the largest number of women members.[33] Moreover, there was little improvement in the stability of the female membership as between 1911-28 and 1928-47. The apparently greater membership stability of the unions in Category B becomes the more remarkable when it is considered that it has been attained despite the existence within them of an increasingly important sector of women members.

It seems reasonable to assert on the basis of this analysis that, beneath the impermanent accretions which conditions of rapid trade union development bring to the general workers' unions, there lies a permanent core of membership possessed of a stability in its organisational behaviour not usually associated with the 'clearing-houses' of British trade unionism. Nor is this change accidental. Instead it is firmly based on the changing technique of modern industry. 'With the development of new skills and numerous semi-skilled grades, the distinction between these unions and others on the basis of skill is of decreasing importance.'[34] It can now be added that the distinction on

[33] The Category A unions contained 67·0 per cent. of the women members in 1911 and 41·9 per cent. in 1935; the leadership then passed to Category C, which had 41·8 per cent. of the total in 1936 and 37·6 per cent. in 1941; in 1942 and 1943, Category B had 41·7 per cent. and 36·9 per cent. of the women members respectively; since then Category C has again led with around 35-39 per cent. of the total.

[34] *British Trade Unionism: Six Studies by P.E.P.* (1948), p. 16. For an expansion of the point, see *Industrial Unionism: A Critical Analysis*, Occasional Paper No. 2 of the Department of Social and Economic Research. University of Glasgow.

the basis of membership stability is also of decreasing, though still substantial, importance.

This is an encouraging conclusion. The decline in the relative importance within the trade unions of the traditionally well-organised groups of manual workers might have been expected to bring in its train a decline in that stability of organisation which these groups, above all, represented. Instead, as we have seen, the non-manual workers' groups, now an important section of the movement, show already a remarkable stability of membership.[35] Moreover, the increasingly important 'more newly-organised' groups of manual workers, always the least stable element, now show strong evidence of having matured considerably, and, in so doing, of having acquired an element of stability in their membership composition which was once the monopoly of more skilled groups. This development has surely the utmost significance for those who will have to shape the future structural pattern of the British trade union movement.

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[35] This is, of course, much more true of the teachers, civil servants and local government employees than of the bank clerks, insurance agents and distributive workers, among whom there is to be found not so much 'stability' as stagnation at a fairly low level of organisation.

TRANSPORT COSTS IN THE NORTH OF SCOTLAND

THE North of Scotland is a poor region, not highly gifted by nature with resources, and endowed with a sparse population.[1] Its main industries are agriculture, fishing and timber, and there is also the tourist trade. The proportion of the population engaged in manufacture is low, and new post-war manufacturing enterprises have been much fewer than in most other areas of Scotland. Nevertheless, there has been some growth of manufacturing industries, sometimes associated with agriculture, in places like Fraserburgh, Buckie and Elgin, and particularly in Turriff and Inverness. This has led to an expansion of employment for women in the North and North-East, though opportunities still remain generally few;[2] opportunities for men have contracted in this area, as they did generally in the West and the Islands between 1938 and 1948. Unemployment has been high in the fishing ports of the North-East and elsewhere on the East Coast. On the other hand, the prosperity of agriculture in recent years has helped to enliven many of the inland country towns, which have expanded, often at the expense of the population of the surrounding countryside. At the same time the North of Scotland Hydro-Electric Board has brought many employment opportunities and a large purchasing power to the area. Nevertheless, population in most areas has been reduced since 1938 by emigration. Incomes are also low,[3] and in spite of large sums

[1] Most of the following facts are taken from the Scottish Council (Development and Industry) Report, *Local Development in Scotland (1952)*. See also their report on *Unemployment in Aberdeen and District (1952)*.

[2] This fact, not commented upon, is revealed in Table 4 of *Local Development in Scotland*.

[3] In 1949-50, average incomes were £348·2 in the crofting counties, and £382·8 in the North-East counties of Aberdeenshire, Banff, Moray and Nairn, as compared with £380·5 in Scotland as a whole, and £398·9 in England and Wales (*Ninety-fifth Report of the Commissioners of Inland Revenue*, Cmd. 8726). In the case of every individual Northern county, incomes from wages and salaries and from profits and professional earnings were lower than average for Scotland. Incomes from property were higher than average in Argyll, Inverness and Aberdeenshire, due no doubt to the presence of large landed estates, though these incomes form but a small part of the whole. Thus incomes on the average in the North-East were higher than in Scotland because of a high proportion of incomes from profits, etc., in the area, not because incomes were higher for any of these broad categories.

poured by the Government into the Highlands,[4] the standard of living, measured in the conventional way, is low, though some would argue that the Highland ' way of life ' is preferable.

In general, the problem is that of an area suffering from lack of employment opportunities and some high unemployment rates, an area with a low standard of living and dependent on some industries, in particular fishing, the future of which is not too bright. Enterprise seems to be lacking, and local enterprise is what is most needed. This applies both to the fishing industry, even in Aberdeen,[5] and to the Highlands generally.[6] On the other hand, the comparatively flourishing state of agriculture, and the development of hydro-electric power and forestry, bode well for the future.

I

Most complaints in relation to Scottish transport facilities seem to refer to rail services and costs, but the strange fact is that rail charges are those least related to cost, so that remote areas benefit by the implicit subsidisation given by equal per-mile rates for passengers and goods throughout the country. Many remote areas of Scotland benefit from proximity to the sea, and sea costs are lower than rail costs for equivalent distances, though there are the disadvantages of delay and uncertainty. In the case of road transport, improved roads would no doubt lower costs in the Highlands, and bridges over the Firth of Forth and the Firth of Tay would improve the position of the North-East, but the degree to which the expense of these large improvements would pay for themselves is perhaps doubtful. A general improvement of roads in the Highlands would probably be more profitable. In the case of the railways, the evidence is that Scotland is subsidised by England. The real problem is not so much the trunk routes as the cost of collection and delivery to and from railhead, pierhead and main road.

[4] *A Programme of Highland Development* (Cmd. 7976) gives details of many special grants and forms of expenditure incurred in the Highlands by the central Government, though it nowhere draws together the figures. It would be extremely valuable if the Government departments concerned were to draw up an account of the various sums spent in the Highlands in the way both of special grants and of normal grants to local authorities. The results might be revealing in more than one respect. In a parliamentary reply on 13th May 1952 (Hansard, cols. 1095-6) it was said that £10·5 m. was to be granted to the Highlands and Islands for services for which the Secretary of State was responsible in 1952-3. (This is not a complete account of all Government expenditure.)

[5] See, for example, the Scottish Council Report on the *Aberdeen Fishing Industry (1951)*, and also M. P. Fogarty, *Further Studies in Industrial Organisation.*

[6] See T. A. F. Noble, 'The Economic Development of the Highlands', *Manchester School,* May 1951, and *Local Development in Scotland,* para. 93.

Railway Costs

One would expect that the operating conditions on the Scottish region of British Railways would be such as to raise costs above those in other regions. This is indicated by the fact that the Scottish region had 17 per cent. of all stations in the system and 18 per cent. of the mileage of road in 1951, as compared with 6 per cent. of all passenger journeys originating, 12 per cent. of all freight originating, and 10 per cent. of all ton-miles carried.[7] It cannot, furthermore, be due to the extreme inefficiency of the Scottish region that practically all the indices of efficiency usually show Scotland at or near the bottom of the list of all the regions. The obvious facts of mountainous country, long hauls and sparse traffic must have contributed to this result.

The relevant figures for freight working are given in Table I, and though they are given only for 1951, almost exactly the same results are to be found for every year since 1947. Thus it required 71 lb. of coal for every mile an engine travelled in Scotland, as compared with 62 lb. for all regions of British railways, and no other region had so high a figure. More engine hours were required to provide for an hour's working of a train by an engine than in any region except the Southern and Western, presumably because of the infrequency of traffic in a given area. On the other hand, each hour's working of a train by an engine carried the train more miles than in any other region, presumably because there are long hauls between stops and because the infrequency of traffic allows continuous running. This counteracts the other effect, so that more train miles were run for each hour of an engine's use overall than in any other region except the North-Eastern. It is not, however, the number of miles that trains run that matters, but the goods that they carry. Each goods train in Scotland has fewer wagons than in any other region, and the result is that each hour of an engine's time pulls fewer wagon miles than in any other region except the Southern (this region has unfavour-

[7] *British Transport Commission Report for 1951.* These figures should be qualified by the following facts. (*a*) Scotland had 16 per cent. of passenger and freight stations, and 26 per cent. of stations for freight only, the latter presumably being less costly to maintain. (*b*) It had only 14 per cent. of the mileage of track, as compared with the mileage of road. (*c*) It had 15 per cent. of First-class journeys, as compared with 7 per cent. of all Third-class journeys, but it had 9 per cent. of all Excursions, etc. (*d*) The freight loaded was rather more heavily weighted in favour of the more highly remunerative merchandise (14 per cent.) and livestock (36 per cent.), as compared with the poorly paid minerals and coal traffic. (Figures are in terms of tons, none being available in terms of revenue.) The same applies to the merchandise and livestock ton-miles (14 per cent.). But, on the other hand, in all branches of freight traffic there was a noticeable decline in Scotland's share between 1947 and 1952.

able conditions for freight, and often comes next to Scotland in the list; on the other hand, it has a very favourable passenger position, which is lacking in Scotland). The proportion of wagon miles loaded in Scotland is higher than in any region except the Western, but this

TABLE I

BRITISH RAILWAYS, 1951

	All Regions	Scotland
Locomotive coal Lb. per engine mile	62·38	70·86[a]
Total engine hours per train engine hour	2·25	2·44[a1]
Train miles per train engine hour	8·30	10·40[a]
„ total engine hour	3·68	4·27[a2]
Wagon miles per train mile (Number of wagons per train)	32·39	25·23[b]
Wagon miles per train engine hour	221·88	218·62[b3]
„ engine shunting hour	258·27	211·93[b4]
„ total engine hour	119·35	107·61[b4]
Loaded wagon miles as percentage of all wagon miles	72·04	75·85[a5]
Average wagon load at starting point (tons)		
All classes of traffic	8·46	7.82[b4]
Merchandise and livestock	4·01	4·07
Minerals	11·33	10·05[b4]
Coal and coke	11·39	10·38[b4]
Net ton miles per train mile (Train load in tons)	161·58	113·02[b]
Net ton miles per total engine hour	595	482[b4]

Factors more favourable to Scotland than throughout British Railways are underlined.

(a) Highest of any region. (b) Lowest of any region.

[1] Except Western and Southern. [2] Except North-Eastern. [3] Except London Midland and Western. [4] Except Southern. [5] Except Western

favourable factor is offset by the fact that average wagon loads, except for merchandise and livestock, are lower than for any region except the Southern.[8] The result is that train loads are lower than in any

[8] Actually these figures are only for tons originating from Scotland, whereas the ton-mile figures refer to wagons forwarded and received, but the conditions must be much the same in both cases to produce the over-all picture that emerges.

other region, and each engine hour results in fewer ton miles being carried than in any region except the Southern.[9] Though there are no figures of costs available, it must be clear that the working of the railways in Scotland results in higher costs per ton mile of traffic. Thus Scotland would suffer from any decentralisation that went so far as to relate charges to costs within regions. The freedom of an independent Scottish railways system to make its own charges, unless it were helped by subsidies from other regions, would almost certainly result in higher charges for goods. This would be particularly true of the northern parts if charges were related to costs, as these lines do not cover their costs.[10]

Incidence of Transport Costs

Transport costs bear most heavily on bulky goods of low value, and, in the extreme cases of materials such as sand and gravel, the goods are scarcely transported at all. An area will therefore suffer high transport costs on its imports, if it lacks a supply of necessary raw materials of this nature. The most important bulk imports into the North of Scotland are coal, building materials, petrol and oil, and, above all, feeding stuffs and fertilisers.

In regard to coal, the natural pattern of coal deposits has not favoured England notably at the expense of Scotland. London is a considerable distance from the coal areas, and the South-West of England has to bear very high coal transport costs. On the other hand, the remote Highland areas are very far from the coal-seams. Many of the the most remote Highland areas have sea supplies of coal, and transport charges by sea are not as high as by rail.[11] Nor, in fact, are the rail transport charges excessively high. In September 1950 the cost was 17/4 a ton to Oban, 21/8 to Lairg, and 23/1 to Wick,[12] but the rail rate borne by domestic coal in central London at that time was about 22/2, and it was higher in other parts of London and in areas to the south of London. The real burden of transport

[9] Net Ton Miles per Total Engine Hour is described by the British Transport Commission as 'perhaps the most important single statistic of efficiency for freight working' (*Report for 1950*, para. 128).

[10] *British Transport Commission Report for 1951*, p. 75, para. 31, and *Report for 1952*, p. 24, para. 49: 'sparse areas like the Western Highlands and Islands of Scotland where neither the road, rail nor water services are economic.'

[11] Coal is by far the largest import into North of Scotland ports, and comes largely from Tyneside, though rather under half the total supply to the west coast comes from Clyde ports—actually less than comes from the Tyne. (See Ford and Bound, *Coastwise Shipping and the Small Ports*, Table IV, p. 17.) This rather odd pattern of supplies will certainly raise costs.

[12] Scottish Council report on *Highland Transport Costs* (1951), p. 10, These are apparently rail charges.

costs on coal, as on many other commodities, is from railhead or pier-head, particularly in the case of isolated farms without proper road access.

The Scottish Council reported that building costs are higher in the Highlands, though rents are kept down by special Government subsidies. Cement, slates, bricks and timber are alleged to be dearer, though some fittings for houses are sold at a delivered price in certain Highland centres.[13] But the basing-point system in cement pricing does not prevent prices being much higher than those in England.[14]

Petrol and oil are usually sold at three different prices according to distance from the main importing centres and refineries, the highest price being that in 'general zones', but the North of Scotland, that is to say roughly the area north of the Caledonian Canal, pays more even than general zone prices, while the Shetland price is half-way between the general zone price and the North of Scotland price. In the Western Isles there is no fixed retail price, only a price for petrol delivered at the nearest pier, which is equal to the lowest normal price; to this have to be added pier dues, cartage costs, and the sellers' margin, so that the consumer pays considerably more than on the mainland.

As agriculture is the main industry of the North of Scotland, the incidence of transport costs cannot be ignored, but it is extremely difficult to make any accurate calculations. The Scottish Council estimated that about 70 per cent. of the products of Highland agriculture received guaranteed prices at collecting centres, so that the only burden of transport charges was the extra haul to the collecting centres necessitated by the remoteness of the farms and crofts. The more important burden is the transport charge on 'imports', particularly fertilisers and feeding-stuffs.[15] But there are other charges on seeds, machinery, and movement of livestock (store and dairy stock to farms), about which farmers complained to the Transport Tribunal in 1950. It was then estimated that on these items farmers paid a rail bill of over £10 m., taking no account of the goods carried by road, before the increase in rail charges by a sixth in May of that year.[16] Of this, £5·5 m. was paid on fertilisers and feeding-stuffs, and £2·2 m. on seeds, the cost per ton working out at £1 for fertilisers, £1:5/- for feeding-stuffs, and about £2:10/- for seeds. Prices of feed-

[13] *Ibid.*, paras 21-2.
[14] *Cement Costs* (Ministry of Works, 1947), Appendix VI. Cement from the Thames area is the largest single cargo after coal coming to North of Scotland ports (see Ford and Bound, *op. cit.*, Table V, p. 18, and Table XIV, p. 34).
[15] *Op. cit.*, p. 8.
[16] *Evidence*, pp. 211, 234.

ing-stuffs in Scotland in 1949 varied between about £11 for some dried grains to £28 for fish meal.[17] Thus if transport costs were at no more than average for the whole of the country, they would have represented between 4½ per cent. and 11 per cent. of the cost of feeding-stuffs, and they were no doubt higher in the North of Scotland. Fertilisers were sometimes sold at delivered prices to the buyer's station, as in the case of sulphate of ammonia, which was sold at £10:8/-, including a rail charge of 24/-; these prices increased to £10:12/- and 28/- respectively in May 1950.[18] This means that transport charges represented 11½ per cent. and 13 per cent. of the delivered price before and after the change, which gives some idea of the importance of these costs in the case of fertilisers. Sulphate of potash was sold at this time at a price of about £19 a ton ex port, so that transport charges cannot have been much more than 6-7 per cent.; but in this case farmers in distant areas would have had to pay the additional charges.[19] In fact, it seems that higher transport costs were one of the factors reducing demand for fertilisers in 1951.[20]

Forestry is an industry important to the North of Scotland, and wood is costly to transport. Complaints are made by the forestry industry that round logs are charged at the same rate by the railways as sawn timber, which would encourage sawmilling near the forests, and might affect adversely small forests unable to do the cutting. But this appears to be a case where the railways relate charges to costs of handling, and not merely to what the traffic will bear.[21]

[17] *Agricultural Statistics, 1945 to 1949, Scotland,* Part II, p. 68. These are usually similar to English prices.

[18] Statutory prices; from *The Economist, Records and Statistics.* The increase of 4/- was allowed to account for the increase of one-sixth in rail charges; from this we deduce an average charge of 24/- before the increase. On 16th April 1951, when rail charges went up by 10 per cent., the price of sulphate of ammonia went up 3/- to allow for this.

English fertiliser prices in 1949 varied from £2:3/- for basic slag to under £5 for ground rock phosphate and superphosphate and over £10 for nitro-chalk and sodium nitrate (*Annual Abstract of Statistics*).

[19] The increases in prices for fertilisers in May 1950 were not the same. Some increased in price by 2/6, some by 3/- and some by 4/-, representing rail charges of 15/-, 18/- and 24/- before the change. On 16th April 1951 some had increases of 1/9 a ton, some of 2/-, some of 3/- and some of 3/6. See *Records and Statistics,* May 1950, p. 502, and *The Times,* 16th April 1951. The evidence of the Fertilisers' Manufacturers' Association Ltd. to the Transport Tribunal Enquiry of 1950 was that the increase in rail charges would add 2/6 a ton on the average to the cost of delivery of fertilisers, which means that they assumed an average delivery cost of 15/-, that is to say the lowest of the three figures above. (*Evidence,* p. 125, Q.2222-3). Perhaps the increases allowed also for increased transport charges on raw materials to the factories. In that case our percentages would have to be reduced to take account of this.

[20] Cmd. 8521, para. 89.

[21] Scottish Council report, p. 9; *Transport Tribunal Evidence,* 1950, p. 214.

Most timber from this area is sold as pitwood, and the Coal Board pays the freight on it,[22] but when, as with the timber blown down in the storms at the end of January 1953, other markets are required, the transport charge becomes burdensome; in this case, special concessions were requested and had to be made, both by the Government and by the railways.[23]

The fishing industry has some reason to complain about the effects of transport costs. It appears that fish costs rather more to transport to the consumer than many other foodstuffs. For sales in markets in the South of England, in which Aberdeen and other North of Scotland fishing ports still compete, the transport charges from Aberdeen seem to represent about 5 per cent. or more of the final price to the consumer, and Hull and Grimsby have an advantage in this respect of about 3 per cent. or more of the final price, which may represent 6 per cent. or so of the returns to the fishing community. The position on the West Coast might be even worse.

Some indication of the effect of transport costs on consumption goods prices can be obtained from the prices of foods controlled by the Ministry of Food. Usually price-controlled goods have had uniform national prices, but the fact that special premia have been consistently added to these prices for areas in the North of Scotland reflects the necessity for even the Ministry of Food to take account of the harsh facts of distance. The few examples we can quote give an idea of the practices that must operate in the case of other commodities not subject to price control. Details are given in Table II of the position in 1952. An addition is made to prices for areas north of the Caledonian Canal, and a further addition for the Western Isles. The foodstuffs in question included bread, sugar, bananas, rice, tinned foods, pulse and peas, and jams. The margin allowed seems to have remained constant in spite of increases in price, and therefore to have diminished in importance, but in some cases it is a not entirely unimportant addition to price; for example, in the case of the larger loaves, it represented, in the Western Isles, over 10 per cent. of the normal price.[24] Nevertheless, there is a wide range of groceries not affected by these price differences, including fats, cheese, bacon, sausages and meat products, tea, flour, biscuits, dried fruit, and sweets, though in some cases the abolition of price controls may have resulted in manufacturers charging different prices in these distant regions; also, retailers may have charged additional delivery premia.

[22] Scottish Council, *ibid.*

[23] *The Times*, 1953, on 16th March, 27th March, 13th May, 11th June, 26th June, 2nd July.

[24] But the 14 oz. loaf has always been maintained at a national price everywhere.

TABLE II

ADDITIONS TO FOOD PRICES IN THE NORTH OF SCOTLAND[1]

Food	Quantity	Normal Price	Additions	
			North of Caledonian Canal	Western Islands
Bread	14 oz.	4½d.	—	—[2]
	1½ lb.	7½d.	½d.	1d.[2]
	3½ lb.	1/3d.	1d.	2d.[2]
Sugar	lb.	5¾d.-6½d.	¼d.	½d.[2]
Rice	lb.	9d.-10d.	¼d.	½d.
Bananas	lb.	1/-	½d.[3]	1½d.[2]
Canned fruit (imported)	can	1/6d.-8/6d.	¼d.	½d.
Canned meat (except corned beef, mutton and pork)	lb.	1/7d.-7/1d.	¼d.	½d.
Canned fish (imported)	can	1/2d.-5/9d.	¼d.	¼d.-½d.
Pulse and peas	lb.	5d.-1/1d.	¼d.	½d.
Jam and marmalade	lb.	1/1½d.-1/6½d.	½d.	½d.
Mincemeat and fruit curd	lb.	8½d.-2/8d.	½d.-1d.	½d.-1d.

[1] Information from Ministry of Food Retail Price Lists. Prices from 21st edition, of 19th May 1952, except for pulse, jam and mincemeat, which are from 16th edition, of 7th November 1949. (Price control was removed 1950.) The additions allowed have remained constant in spite of changes in prices.

The area north of the Caledonian Canal includes the islands of the Pentland Firth and the counties of Orkney and Zetland, unless otherwise stated.

[2] Including counties of Orkney and Zetland.

[3] Counties of Caithness, Sutherland, Argyll and Bute, and parts of the counties of Ross and Cromarty, Inverness, Moray, Banff, Aberdeen and Perth.

In general one would not expect manufacturing industries to be seriously affected by transport costs, because of the relatively high value of their products in relation to weight, and because of the selective process that would prevent settlement in the area of industries that would not meet this criterion.[25] The Scottish Council survey

[25] For an exceptional case situated at Wick, see below, p. 90.

found that of fifteen firms in the Highlands, seven did not regard themselves as hampered by transport charges, and five were doubtful. Of the three that mention difficulties, it is noticeable that two of them sell most of their products in England; on the face of it this is a strange fact, which suggests greater competitive power than the complaint itself allows for.[26]

II

There is no automatic process that guarantees equal incomes as between regions within a large one-currency area, any more than free trade guarantees equal real incomes in different countries. There is certainly a tendency towards such an equality, but no guarantee that the goal will be reached. An unfavoured region such as the North of Scotland will normally suffer from a lack of balance on trade and services account, made up by an inflow of Government expenditure on the social services and balanced by only a small outflow of taxes to the central Government. Alternatively, the lack of balance is made up by low incomes and unemployment restricting imports. High transport costs for goods coming from or going to other areas have the effect of raising prices and restricting competition from outside as well as of inhibiting exports from the area. They reduce the amount of interregional trade below what it would otherwise be. But it does not follow that the right policy is to subsidise transport.

The aim of policy in such a remote and comparatively ill-favoured area as the North of Scotland is clearly to prevent avoidable unemployment and ensure a reasonably high standard of living for the inhabitants, if it is desired that they should remain in the area at all. Complete equality of incomes and living standards between different areas is impossible to achieve, but the most serious inequalities clearly need mitigation. From this arises the intractability of the Highland problem. The main possibilities for policy are:—

(*a*) To reduce transport costs, either generally or on some commodities.

(*b*) To encourage emigration from the most economically backward regions.

(*c*) To encourage investment in the area.

(*d*) To increase Government grants.

Formerly, lower wages in these areas may have mitigated some of the problems, at the expense of lower real incomes. Thus, in the past wages in Aberdeen used to be lower than in the industrial belt of Scotland, the differential presumably being determined roughly on the one hand by the competing prices quoted in distant markets by

[26] *Highland Transport Costs*, para. 24.

producers nearer to those markets, and, on the other hand, by the size of the wage difference that would drive workers to migrate to other areas. Nowadays unions are less ready to accept these differences, though some differentials in earnings, if not in agreed wage-rates, still remain.

It is not the purpose of this article to discuss all possible policies for the North of Scotland, but a proper discussion of the question of transport costs and subsidies must take account of the main alternatives. These may be outlined briefly as follows.

(*a*) *Transport Costs*

People in remote areas have often suggested that the proper remedy for their troubles is to reduce the burden of transport costs either by further road or rail developments or by direct subsidies. Many such proposals were made in evidence to the Barlow Commission on the Distribution of the Industrial Population before the war. Perhaps the most extreme was that advocated by Mr. Harold Macmillan, M.P., and Mr. J. R. H. Cartland, M.P., and approved by the Association of County Councils of Scotland and more tentatively by some representatives of the Association of Counties of Cities in Scotland, for the postalisation of transport charges, or the provision of 'flat' rates, irrespective of distance.[27] The Aberdeen fish industry enjoyed this experience during the war until the beginning of 1950, and others have quoted the parallel of railway 'agreed' charges.[28]

The advocates of these subsidies usually stress the difficulties of selling the products of remote areas in distant large markets, and the undoubted pull that large markets have on the location of firms. What they almost always fail to appreciate is that high transport costs also act like a tariff to protect local industries from the competition of distant firms. Transport subsidies benefit transport users, encourage the use of transport facilities and stimulate interregional as compared with intraregional trade. It is impossible to say *a priori* whether a given improvement in transport facilities will benefit local trade more by opening a wider market for it than it will damage it by flooding the local market with competitive imports. If transport subsidies could be paid only on exports from a region, the area could in appropriate circumstances gain the benefit which a tariff or export subsidy gives in the national sphere, and which may improve employ-

[27] Evidence on 18th day (31st March 1938) and 9th day (15th December 1937—particularly pp. 210-6, 224, 226-30) respectively. Mr. Hector Hughes, M.P. for North Aberdeen, has been a devoted supporter of this cause in the House of Commons for many years.

[28] But these latter are not an exact parallel, as they merely represent an averaging of the transport charges due by one firm and are based on the charges that would be paid in any case by the ordinary method of charging.

ment conditions. It is therefore natural that the export trades of a region should be vocal in asking for a transport subsidy, particularly if they have also a heavy transport burden to bear on their raw materials, but what is forgotten is the burden on industries serving the local community, and the consequent possibility of unemployment.[29]

Even if the effects on producer interests are doubtful, consumers must gain from the reduction in costs and increased competition from outside. Some enthusiasts for international (and hence presumably interregional) trade sometimes talk as if an increase in its volume were always desirable under any conditions. By appropriate subsidies there is of course no difficulty in achieving this aim, but it is obvious that, though the improvement of transport facilities has been one of the most fruitful results of the Industrial Revolution, and one of the most potent forces raising real incomes and spreading the benefits of higher incomes, the indiscriminate encouragement of transport services would serve no useful purpose. Even in its social effects, frequent and easy personal travel is by no means an unmixed blessing. The question that arises is whether, if a subsidy is to be given to level out differences of real income between areas, this is the most appropriate method of achieving the aim.

The simple objection to a subsidy to a particular industry or service is that it begs the question whether the beneficiaries would not be better off if they were free to spend the money as they wished and not forced to spend it on the subsidised goods or services. It is not obvious that producers and consumers would buy the same amount of transport services if the transport charges represented the costs of the transport incurred, but they were at the same time reimbursed by extra incomes. If they would not, it is clear proof that it would be wasteful of resources to encourage them to use transport by reducing these charges below the costs of the resources involved. Food subsidies and housing subsidies are justified, apart from the peculiar post-war economic situation, in so far as it can be argued that consumers ought to be encouraged to consume more of these particular goods than they would if they had to pay the full cost of the resources involved. This is obviously not in the least plausible in the case of transport services, except when it is the only way of keeping communications open and is necessary for the postal system, as with MacBrayne's services to the outer isles.

Flat rate proposals have an additional disadvantage in that the cost of the subsidy is borne by transport users elsewhere. Even if it

[29] *Highland Transport Costs*, however, rightly points out that a flat rate for transport 'might only benefit those parts of the country where industry is already strongly established' (para. 35).

were accepted that it is desirable to reduce transport costs for producers and consumers in remote regions, is it necessarily advisable to levy the subsidy on transport users elsewhere? This will involve an under-utilisation of transport resources elsewhere as compared with what would otherwise happen. It will normally be better to raise the money out of general taxes.

If this argument is correct, it implies a criticism of railway tariffs based on the principle of 'what the traffic will bear', and an assumption that railway charges can be based on costs. Railway executives and railway spokesmen have always refused to assess the cost of particular traffics, and with some justification in view of the element of joint costs involved in the maintenance of any stretch of line that carries different traffics. On the other hand, there should be no more difficulty in finding out the costs of a particular line or stretch of a line than there is in spreading general overheads over the several departments of a multi-product factory, difficult as this may be. Even if it were necessary that the allocation of the costs of a particular line should be met by charging what the traffic will bear (and the draft scheme of the British Transport Commission, with its stress on handling costs, suggests that at least an attempt to get away from this principle has been made by the British Transport Commission),[30] it would seem that sound use of resources would demand that each stretch of line should pay for itself.[31]

[30] *Draft Outline of Principles proposed to be embodied in a Charges Scheme for Merchandise Traffic*, December 1949.

[31] See *British Transport Commission Report for 1951*, App. to chap. 2, pp. 71-5, where 'long-term marginal costs' are suggested as a proper criterion (para. 21), and the possibility of costing Scottish railways is discussed (para. 30).

Fixing charges to cover costs of particular lines does not preclude discrimination between traffics, and charging 'what the traffic will bear' in particular cases. This may be necessary where there are indivisible expenses and particularly in cases where lower total costs are obtained with duplication of road and rail services. As carefully argued by Prof. W. A. Lewis (*Overhead Costs*, pp. 19-26), the proper rules are that in no case must the price of a service be below the marginal cost of performing it, nor must it be above the marginal cost at which the other industry can perform it. There is no case for a subsidy. These rules are violated in an obvious and most wasteful form in the case of long-distance bus services between Scotland and England, whose marginal costs are much greater than the marginal costs of equivalent rail transport, but whose actual charges are much less, because the railways discriminate against long-distance passengers. (See figures in *British Transport Commission Report for 1950*, pp. 70-2, and *Report for 1951*, pp. 71-5.)

For the whole problem of making rates reflect costs, see 'Transport Policy Before and After 1953' by Gilbert Walker (*Oxford Economic Papers*, March 1953), especially pp. 94-7, 111-6. Prof. Walker thinks it will be necessary to subsidise areas such as the Western Highlands, where 'no service by bus or rail can cover the costs at any fare the ordinary traveller can afford to pay', but adds that this is a matter 'more appropriate to fiscal policy than to the duty of transport undertakings' (p. 112); *i.e.* an outright subsidy must be given, and transport users elsewhere must not be mulcted.

It is indeed true that the economic cost of the railways does not necessarily include the interest charges that the British Transport Commission has to pay on its railway stock. Where the interest charges represent capital used in the business and needing to be replaced, they are properly a burden on the users of the railways. But where they represent capital costs incurred once and for all (such as parliamentary costs incurred in the acquisition of the land for the track), which do not represent the current use of resources, or resources that will have to be replaced, there is no reason why transport users should be saddled with a burden that would be better borne by the State. It is a serious question whether the British Transport Commission is not burdened with such a series of capital obligations as to put an intolerable strain on transport users. With any given stretch of line, the first question to be asked is whether, if there were no line, a new one would have to be constructed, in which case the traffic should bear the cost of such capital expenditure. Secondly, there is the actual out-of-pocket cost of keeping up a line. If this out-of-pocket cost cannot be borne by the traffic that uses it, then the line should be closed. The argument of the Federation of British Industries, that certain lines required for defence reasons should be maintained out of defence funds, is relevant in this case, if it can be shown that the line must be maintained for defence reasons, and the difference between what the line can earn and what it costs to keep it usable should rightly be borne on defence account.[32] This argument has been used of the main lines in the North of Scotland, but Defence Departments do not apparently regard them as so essential.

There are some who regard the existence of the British Transport Commission as precisely an opportunity for the kind of hidden subsidies as between traffics and regions that are objectionable on these criteria. The monopoly powers of the Commission, subject only to the competition of road and sea transport, make it easy to devise such hidden favours to traffics that normally travel by rail. The tradition of generally uniform mileage rates throughout the country, though strongly mitigated by the predominance of exceptional rates in dense traffic areas, provides a basis for further discrimination in the same direction. But it would be most objectionable if new charges schemes were to be based on any such criteria, and as far as possible existing discriminations should be ironed out, even if it means great differences between the charges per ton-mile for a given commodity in different parts of the country. Any subsidies that are

[32] Statement of 18th September 1950.

required on general grounds of national advantage should be given by the State, and openly admitted.[33]

The available evidence suggests that the British Transport Commission is rightly averse to using transport charges as a means of paying for social objectives. This can be seen in various comments in the report of the London Plan Working Party of the British Transport Commission to the Minister of Transport (1949). The writers, looking at the problem of London from a traffic point of view, naturally disliked the interference of 'planning' considerations with traffic flow; thus they wrote: 'In this respect the interests of planning conflict with the interests of traffic and to fulfil the planning requirements must inevitably involve some postponement in fulfilling traffic requirements' (para. 12).[34] Sir Cyril Hurcomb in his letter summing up the position added: 'In the case of Routes A and B, the justification for the works recommended is primarily attributable to planning, and it follows therefore that a due proportion of the expenditure for such works should properly be chargeable to planning and not to transport' (para. 15).[35] The point was made more clearly by Mr. R. H. Wilson, the Comptroller of the British Transport Commission, in evidence at the sitting of the Transport Tribunal as a Consultative Committee in 1950 to advise on the increase in rail charges. In answer to the suggestion that special treatment should be given to coal rates, in view of the crucial importance of coal prices in the economy, he said: 'If subsidies are to be given, I think it is a strong point that they should be given where they can be seen . . . . It would be bad to say that transport should be sold at less than its cost on the grounds of the policy which we have just heard. Let us have the costs where we can see them.'[36] This is the only right and rational method of fixing prices, and it rules out concealed transport subsidies as a solution of the problems of remote areas.

The argument has been stated in terms of the railways, where the most difficult problems arise. But it applies equally to air services, and sea and road transport. Each particular service should be priced in such a way as to cover its costs, unless it is thought fit to provide

[33] The pre-war Freight Equalisation Scheme, which handed over the benefits the railways gained from derating in 1929 to the advantage of certain traffics, could be regarded as a subsidy from the State, but one that was undesirably hidden from the control of the taxpayer.

[34] Compare also the implicit sneer in para. 37 about 'viaducts, which are disliked by planners'.

[35] In this case, the argument is overstated. The social cost of the bad planning resulting from the bad layout of lines in the London region is a cost attributable to transport users. Transport users could, for example, legitimately be taxed for their interference with the view of St. Paul's from Fleet Street, as a firm can be fined for a smoke nuisance.

[36] 2nd Day of Evidence, p. 33, Q. 399

a subsidy to keep a vital service open. It is undesirable that B.E.A. should subsidise its Highland services out of surpluses earned elsewhere, or that MacBrayne's should subsidise one service with the profits earned on others. Competition between the various services, if the right pricing principles are applied to all, will ensure the right use of resources, and only in limiting cases is any use of licensing necessary. Usually, in the past, licensing has been used to bolster up false charging systems unrelated to costs. If the prices are right, it will be more obvious in which direction investment should proceed, whether in railways, piers, roads, bridges, ferries or airports. If the question of ability to cover costs were properly raised, perhaps less duplication and wasteful expenditure would be incurred.

Concealed transport subsidies are bad, because they lead to a distortion of the use of transport resources that may be difficult to discover and not necessarily in the public interest. Open subsidies on transport facilities in the North of Scotland might help many local industries, but might harm others. It would be better to consider more detailed subsidies on particular freights. If subsidies were given on the import of raw materials necessary in local industry, in cases where there was no possibility of using local alternatives, this would help employment prospects and raise the standard of living.[37] Similarly, special help might be given to enable bulky commodities to be exported cheaply, but the facts seem to suggest that this is less necessary.[38] It would be more difficult here to ascertain whether the subsidies were justified and were not bolstering up an inefficient industry, which should rightly give place to another. Industries in the North of Scotland should produce goods of high value in relation to weight.[39] The Scottish Council report mentions the case of the Glasgow Grit Co., which sends poultry grit from Wick to the South of England, at a transport charge of £3 4/- a ton, which has to be added to a manufacturer's price of £7 per ton.[40] On the face of it, this scarcely seems a likely candidate for subsidy. Again, the fishing industry should probably be given some support in so far as it has any advantages in the area, but it would be foolish to give transport subsidies, when the evidence shows that, in the case of Aberdeen at

[37] The Scottish Council report on *Highland Transport Costs* (1950) would like to see specially low rates for agricultural, fishing and forestry products where helpful, but following their general principles would like to see them part of the general rates system (paras. 36-7).

[38] Many exports are valuable in relation to their weight, and therefore less affected by transport costs. Others are bought by national arrangements at fixed prices. In other cases, complaints arise from unnecessary attempts to sell in distant markets.

[39] See Noble, *op. cit.*, p. 199; *Local Development in Scotland*, para. 91; *Highland Transport Costs*, para. 25.

[40] Para. 24.

least, the trouble is due rather to inefficient merchanting, out-of-date trawlers and lack of enterprise. Greater economies could probably be obtained in this sphere than anywhere else. On the other hand, in the case of an established industry, such as papermaking in Aberdeen, where a heavy capital installation exists, there would seem to be a case for a moderate subsidy if disaster threatened. The difficulty of this sort of procedure would be the uncertainty of the criteria to be applied, the continuing nature of the subsidy, and the dangers of local log-rolling.

In general, therefore, the conclusion is that there is no case for interfering with the principle that transport charges should reflect costs,[41] that subsidies, if given to transport, should be given discriminately on goods likely to benefit the area without hampering any necessary adaptation of industrial structure, and that this is likely to be dangerous in view of the lack of precise criteria, except in the case of imports of basic raw materials not available in the area. There is a stronger case for subsidising the shipping services to the outer isles and other essential services which keep communications open. But even here there are dangers, as is well illustrated by the fact that two-thirds of the milk supply in the Shetlands comes from Orkney and Aberdeenshire, and that milk is also supplied to Skye from Aberdeenshire, while bread goes to the remote Highlands from Glasgow. These cases suggest unnecessary uses of transport facilities, where they are already costly. On the other hand, there can be no objection to improvements in the basic transport capital in the area, and particularly in roads and piers in the Highlands.[42] The same applies to any improvement in the efficiency of the running of transport services, and in merchanting methods that results in lower transport costs. In general, the principle remains that, if subsidies are to be given to producers or consumers, it is better to give a direct subsidy and allow them to use it in the way that will serve them best, than to tie it to expenditure on transport. If this is so, we must turn to other methods of helping the area.

(b) Emigration

Emigration from the North of Scotland has been large in the past, and the nineteenth century overseas migrations drew heavily from this

[41] The Scottish Council's report would like to see this done in the enlargement of the tapering factor in railway rates, and in lower rates for agricultural, fishing and forestry products, the reason being that, 'if it is in the national interest that industry . . . should be distributed more evenly throughout the country', such a procedure would be fair 'even if it meant that the user of short distance transport might have to pay more' (paras. 33-4, 37). The conclusion is not acceptable.

[42] *Highland Transport Costs*, para. 27, on roads in Harris and Lewis.

area. It still continues, but at a lower rate, as the total population involved is not large. Thus the 1951 population of the crofting counties was 286,000, and that of the North-East counties of Aberdeenshire, Banff, Moray and Nairn 252,000, as compared with 163,000 in the city of Aberdeen. While undoubtedly areas can suffer from overpopulation in relation to capital and other resources, so as to warrant emigration as a solution of their problems, it could be more plausibly argued that further migration from the North of Scotland, even if it took the form of a balanced movement of all age-groups, would reduce real incomes rather than the reverse. Thus it would probably result in a loss of some of the external economies of such an industrial centre as Aberdeen. In fact, unbalanced migration has probably gone too far already, and complete evacuation of certain areas would be necessary. If the social objections could be overcome to the break-up of communities, the wholesale removal of the population of certain fishing centres or isolated glens would perhaps be an economic solution of their problems, as has recently been done in the case of the island of Soay. They could be rehoused together in a new community, with some loss of social capital and much net economic gain, the actual cost being heavy, but less than that of alternative policies of 'taking work to the worker'. Public opinion is unlikely to accept this solution in the normal case. Yet it appears a much better solution than to allow areas with an ageing and declining population to drift into decay and increasing poverty, and a certain amount of consolidation of settlement will in any case take place. As stated in *A Programme of Highland Development,* 'fundamentally the Highland problem is to encourage people to live in the Highlands by making it possible to secure there, in return for reasonable efforts, proper standards of life and the means of paying for them'.

(*c*) *Investment*

A deliberate encouragement of investment in an underdeveloped area is likely to raise the standard of living as time passes. An excess of capital equipment can make up for some of the deficiencies in natural resources, the major item in recent years being the hydro-electric schemes. The problem of the North of Scotland, however, is rather one of preventing the capital equipment of the area falling below that necessary to maintain a certain standard of living, and to employ its local population. Hence the necessity of the grants from the central Government to improve local services, and also the general Development Area policy of assisting capital investment in the form of factory building. Of the need for this in the North-East, enough

has been said in the reports of the Scottish Council.[43] In the case of the Highlands, very careful discrimination is needed outside the field of the public services, particularly in agriculture, and much depends on local enterprise.[44] More careful co-ordination of public investment in roads, harbours, forestry, hydro-electricity, agriculture and social facilities seems required throughout, and the existing structure of government in Scotland seems ill-designed to produce the right results in such sparsely populated regions.[45]

(d) Government Grants

It may, however, be the case that aid or subsidies to induce additional capital investment will not ensure a fair standard of living or produce full employment, at least in a short period. The problem then is to decide how to give help to the area so as to raise standards of living at lowest cost to the taxpayer. Clearly in the long run the aim is that the development of the resources of the region should enable the inhabitants to earn a reasonable livelihood. This means the selection of the right spheres for development, and clearly the crucial sphere is that of agriculture in the North of Scotland. Is it then right to give subsidies to agriculture, or to fisheries? There can be no objection to this, on the well-known grounds of the infant industry case, particularly if the subsidies are selected with a view to those developments which are likely to produce results in the long run and in which the process of reorganisation or development is likely to prove difficult. It might be the case, as we have admitted, that, if the use of fertilisers or some particular kind of feeding-stuff ought to be expanded, a subsidy to reduce the high transport costs on it would be justified.

But it does not follow from this that it is normally right to subsidise producers in such a region. A continued subsidy is likely to perpetuate a maldistribution of resources. This can be illustrated by, let us say, a subsidy granted to the fishing industry. To some extent this would enable North of Scotland fishermen to expand their markets at the expense of low-cost fishermen in the South; the consumer outside the area would suffer. At the same time, the local consumer would buy more fish at the expense of other products. Would he not prefer to have the money and spend it as he chose, partly no doubt on fish, but partly on other products? If the consumers in the North of Scotland were given higher incomes, one would expect that most of the benefit would accrue to local producers, and production

[43] *Unemployment in Aberdeen and District*, pp. 20-5; *Local Development in Scotland*, paras 37, 76.
[44] See T. A. F. Noble, *op. cit.*, *passim*, particularly pp. 210-11.
[45] See above p. 76, n. 4.

would be expanded in the directions consumers wanted. The exception would be if all the increased benefits were spent on imported goods from outside the area. It seems that in some areas of the Highlands this is indeed what is likely to happen. In that case the infant industry argument for subsidies to industries making import substitutes applies, but it is an argument not for subsidising well-established Highland products, such as fish, but new industries, such as milk production and baking, in some areas. In short, any subsidies given to producers should disappear in the long run, and are only justified on the infant industry argument.

It may be that rough equality of incomes can still not be assured by funds channelled to investment and suitable subsidies to producers. The fundamental problem is very similar to that underlying the grant of help from one country to another *via* Marshall Aid or Colonial Development and Welfare Funds. It is not necessary that such grants should be tied to particular investment schemes or given as subsidies to particular industries. Their aim is to raise standards of living and meet foreign trade deficits and it is for the area itself to decide what is the correct investment programme and which are the industries to expand. It may be necessary quite simply to subsidise consumers in the North of Scotland, to ensure that they have a reasonable standard of living. How can this best be done, if it proves necessary?

(i) The simplest and most obvious way would be through income tax, but this would not affect the large body of non-income tax payers, probably the bulk of the inhabitants of the area. Nor are local variations in income tax acceptable in Britain.

(ii) Consumption cannot be subsidised directly without affecting the pattern of its distribution between different goods and services, and reductions in purchase tax and other indirect taxes would hardly encourage the purchase of desirable goods, or those likely to help the region to expand its production, except in the case of petrol and oil.

(iii) National insurance contributions could easily be altered, but this would scarcely be practicable as long as the scheme is regarded as an insurance scheme, and not as a peculiarly regressive form of taxation.

(iv) The only alternative general tax that could be altered is the rate on houses. As rates are generally regressive in their incidence on income, subsidies to rates would tend to have their biggest effect at the bottom of the scale of incomes, and therefore would not be harmful in their effects. It is true that there would also be an equivalent effect on commercial activities, which have borne the main part of

the non-household burden since the provisions of the 1929 Derating Act came into effect, but this would be fairly widely spread and would help rather than hinder the general purpose. In the case of the crofting counties, not only are there all sorts of special grants, but the Exchequer pays, in addition to its normal grants for specific purposes, more than half of the net expenditure of the local authorities in all counties except Argyll, the percentage rising to 73 per cent. in Sutherland and 75 per cent. in Zetland.[46] This clearly gives little scope for local initiative or responsibility, and in any case many crofters scarcely pay rates at all.

(v) What other ways are there in which a poor region could be helped? It would be possible to distribute a social dividend, and in theory this would be ideal in the circumstances outlined, though probably beyond the imagination of the administrator or the public to accept.

Our conclusion then is that the adverse conditions in the North of Scotland resulting from poor natural resources, sparse population, and high transport costs cannot properly be met by general subsidies on transport, though some particular services may have to be subsidised. Special transport subsidies for particular commodities paid out of general taxation would be less harmful, but usually undesirable. Special inducements and subsidies to encourage investment in the area are essential. Continuing subsidies to producers are generally undesirable in that they distort the pattern of production, but some temporary and particular subsidies to encourage reorganisation may be justified. Even, however, if all possible schemes have been carried out, a problem *may* still remain. Subsidies to consumers to level out incomes will then be the right and proper method of helping the Highlands, and could be achieved by subsidies to local authorities, altered social security contributions, or a social dividend. There are two questions that will have to be asked: (1) How much money will the country make available to equalise incomes in this underdeveloped area? (2) How can it best be spent in the alternative fields of investment, subsidies to producers and subsidies to consumers? This is in principle a better approach to the problem of the North of Scotland than that of distorting transport charges schemes, or subsidising transport generally.

D. L. Munby

Aberdeen

[46] *A Programme of Highland Development*, para. 11.

RECENT ECONOMIC TRENDS

The Cost of Coal

Coalmining costs have risen much more sharply in Scotland since the war than in any other National Coal Board division. In the first half of 1953, costs were 64 per cent. higher than in 1947, while the increase elsewhere varied between 30 per cent. in the South-Eastern division and 47 per cent. in Northumberland and Durham. It is particularly striking that costs should have risen nearly twice as fast in Scotland as in Wales (see Fig. 1), and that average costs in Scot-

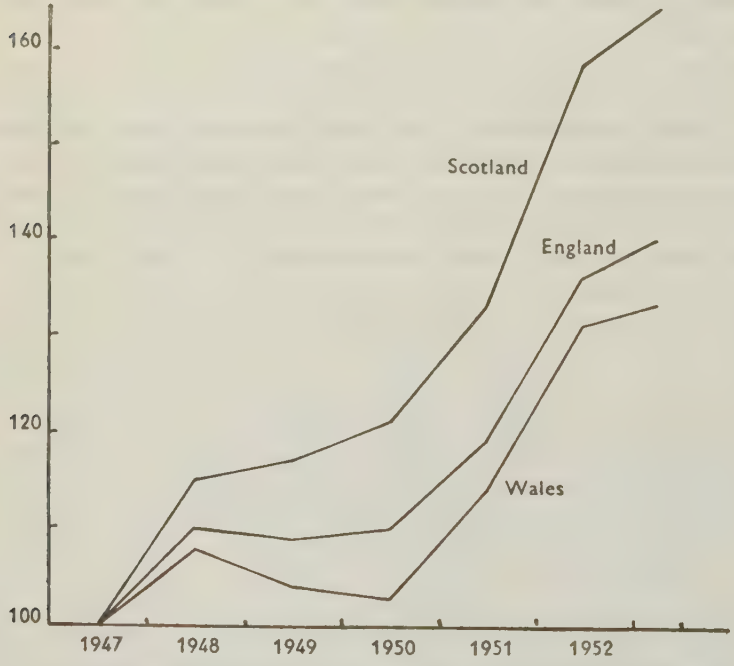

FIG. 1. Increase in the cost per saleable ton of coal in Scotland, Wales (S.W. division), and England (all other divisions), 1947-53.

land are now well above, instead of well below, average British costs.

One consequence of this change is that there is a widening spread between Scottish costs and costs in the best English divisions. For example, the margin above costs in the North-Eastern and West Midlands divisions is now 10/- a ton compared with 1/- a ton or less in

1947; in comparison with the lowest-cost English division—the East Midlands—the excess is 18/- a ton.

It may be thought that these comparisons reflect the high cost of working marginal pits in the declining Lanarkshire coalfield. But it is in Fife, not the central Scottish areas, that the rise in average costs has been steepest—70 per cent. in five years. In every single area in Scotland, average costs went up between 1947 and 1953 by over 50 per cent.: much faster than in any of the N.C.B. divisions other than Scotland. Even in the Lothians, where the climb has been least precipitous, and where average costs are now lowest, neither the rate of climb nor the level of costs compares favourably with the rest of the country. It is perhaps not unfair, and certainly instructive, to compare the trend in South Derby and Leicestershire, the best of the English areas. Between 1947 and 1952 costs rose nearly twice as fast in the Lothians and in 1952 averaged 54/8½ compared with 38/8½ in South Derby and Leicestershire, an excess of 41 per cent. where only five years previously it had been 21 per cent.

It would be foolish to push comparisons of this kind too far or to conclude that coalmining costs in Scotland are already non-competitive with costs elsewhere. In a table showing average costs by division Scotland would still occupy exactly the same position as in 1947. But the trend, particularly in a division where so much of the N.C.B.'s programme of new sinkings is concentrated, is undoubtedly a disturbing one.

Women at Work: Men in Retirement

A higher proportion of the population is gainfully occupied in Britain than in any other country. One reason for this is the high proportion of women at work. As is well known, many women entered industry during the war when the shortage of man-power was acute; and although the majority of them returned to domestic pursuits at the end of the war, there has been a permanent shift both in the willingness of industry to employ women and in the inclination of older women to seek paid work. This is evident from Fig. 2, which shows what has happened in the age-group 35-54, where the change has been greatest. Between 1901 and 1931 the proportion of women in this age-group who returned themselves at the Census as 'occupied' (whether employed or not) was fairly stable at about 22 per cent. In 1951 the proportion jumped to over 34 per cent. and the number of women at work in this age-group showed an increase of over 1 m. So large an increase, even if much of it has been in part-time workers, must have gone a long way to ease Britain's post-war economic difficulties. It represents a once-for-all bonus in man-power on a colossal

scale, comparable with the advantage that has resulted to the country from the disappearance of large-scale unemployment.

Nearly the whole of the increase that has taken place has been in married women. In 1931, out of 1·4 m. occupied women aged 35-54, 427,000 were married; in 1951, out of 2·5 m. occupied women

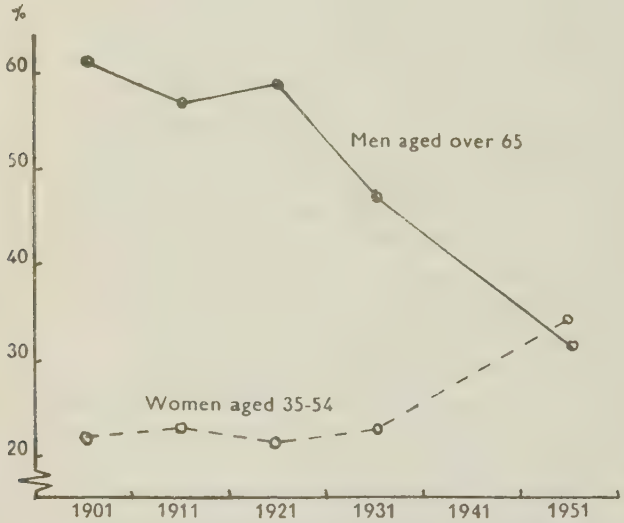

Fig. 2. Proportion of men aged over 65 and women aged 35-54 who were gainfully occupied in Great Britain at Census dates, 1901-51.

in the same age-group, nearly 1·4 m. were married. It would seem that married women, having nowadays a much longer expectation of life after they have finished with child-bearing, are correspondingly more inclined to take a job.

These trends are less evident in Scotland than in England and Wales. Up to 1931 the proportion of older women who were gainfully occupied was much the same as in England and Wales, although it was rarer to find married women in employment. In 1951 there was a marked difference, less than 30 per cent. of the women aged 35-54 being occupied in Scotland compared with nearly 35 per cent. in England and Wales.

Fig. 2 also shows the effect on available man-power in Britain of the tendency to earlier retirement which has operated steadily throughout the past fifty years. The proportion of men aged over 65 who have continued in employment has fallen during that time from 61 per cent. to 32 per cent., while for women the fall has been from 13 per cent. to 5 per cent. If the proportion of the elderly remaining in

employment after 65 were as high now as in 1901, nearly 1 m. more workers would be added to the labour force.

Overcrowding

Although overcrowding is still a good deal worse in Scotland than in England and Wales, the results of the 1951 Census showed a more rapid rate of improvement in Scotland, not only in relation to England and Wales but also in relation to earlier periods. Perhaps the best single measure of overcrowding permitting comparisons over a long period of years is the number of persons per room (see Fig. 3). By

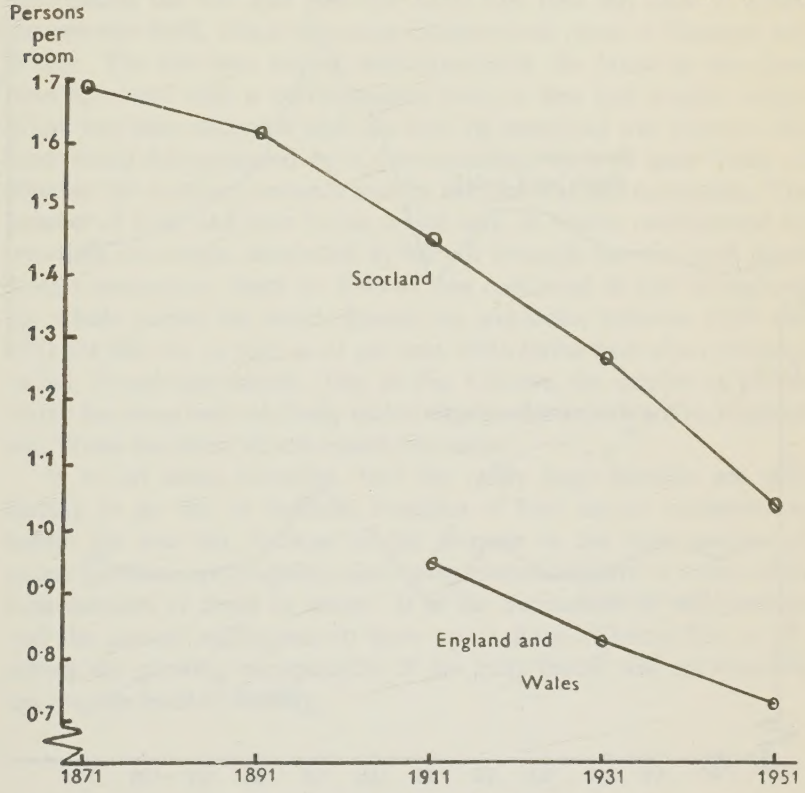

FIG. 3. Persons per room in Scotland and England and Wales at Census dates, 1871-1951.

this standard, there had been an improvement over the twenty years 1931-51 of about 18 per cent. in Scotland and 12 per cent. in England and Wales. The difference reflects the less rapid growth of population in Scotland rather than greater activity in house-building. In 1951, however, there was still a wide margin between the two countries in the availability of house-room per head. It would need a net addition

of over 40 per cent. to the amount of house-room in Scotland to bring the standard up to the English level. This assumes that the average room is of the same size in the two countries, when in fact there is probably a slight difference in favour of Scotland. It is also true that the comparative overcrowding in Scotland partly reflects a greater reluctance to spend money on rent and a willingness to make do with less house-room than a person with the same income would

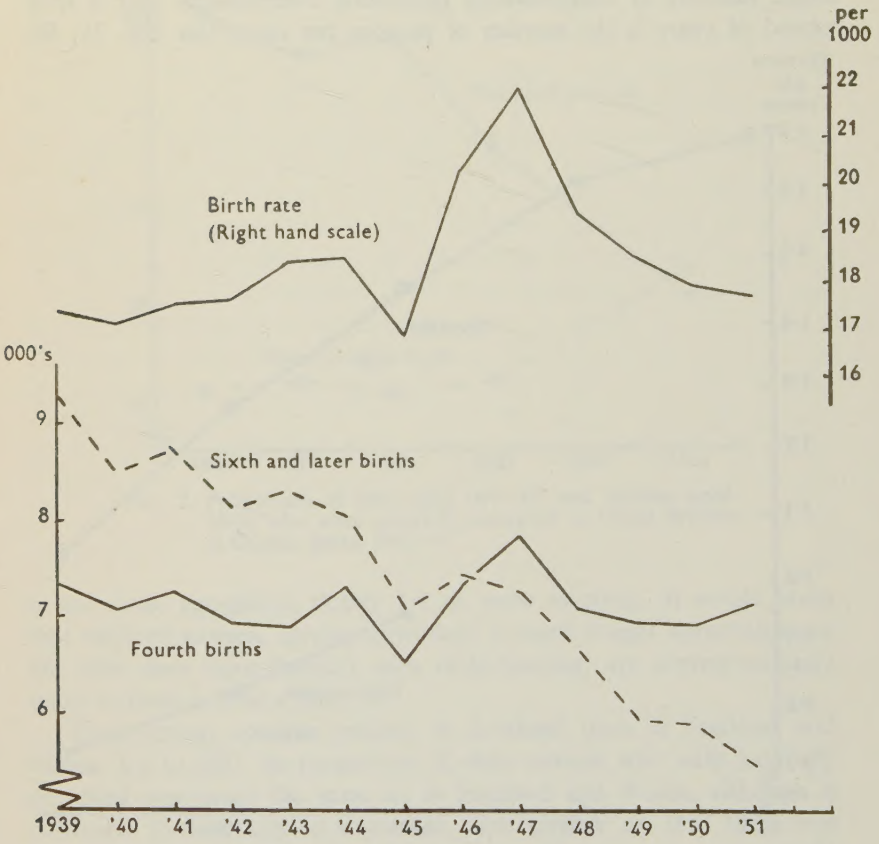

FIG. 4. Changes in births in Scotland, 1939-51.

want in England. It would be a mistake, therefore, to interpret the margin of 40 per cent. in room-space as a justification for the erection of the number of houses necessary to give effect to the current standard in England and Wales. Housing needs depend entirely on the standard one sets and this standard might well vary between one part of the country and another.

The Growing Family

It is widely believed that the decline in fertility that has continued for the best part of a century has at last been arrested and that the fashion of this generation is to have larger families than the generation before. Certainly there is plenty of evidence of this among professional and middle-class families but it is perhaps too early to claim with any confidence that present fertility rates for the whole community will be maintained.

It will be seen from Fig. 4 that the crude birth-rate in Scotland rose during the war and post-war years and then fell back to about the pre-war level. Much the same changes took place in England and Wales. The rise was largely associated with the boom in war-time marriages and with a corresponding crop of first and second births. What was then uncertain and can now be measured was whether this crop would be succeeded by a corresponding wave of later births or whether the tendency towards smaller families was still continuing. The number of sixth and later births, which was, of course, uninfluenced by war-time marriages, continued to fall all through the war, and apart from a temporary check in 1946-47 has continued to fall throughout the whole period for which figures are available; between 1939 and 1951 the fall was as high as 41 per cent. Fifth births have also continued to fall, though less steeply. But, as Fig. 4 shows, the number of fourth births has remained relatively stable. Again, the experience in England and Wales has been almost exactly the same.

It would seem, therefore, that the really large families are continuing to go out of fashion. Families of four are as numerous as before the war but, because of the increase in the total number of young families, are probably also losing ground slightly in comparison with families of three or under. It is the diminution in childlessness and the greater willingness to have up to three children that is offsetting the growing unpopularity of the large family and maintaining the average level of fertility.

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